FOOD RESEARCH INSTITUTE STUDIES

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FOOD RESEARCH INSTITUTE STUDIES

FOOD RESEARCH INSTITUTE

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Prices Effects of Futures Trading.....Holbrook Working

Food Crops and the Isoline of Ninety Frost-Free Days in the United States
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William O. Jones

ECONOMIC MAN IN AFRICA

Few propositions are as crucial to orthodox economic analysis as those relating supply and demand for commodities and services to price. The notion that producers and consumers change their behavior when prices change, and in a predictable direction, is basic to most economic analysis. In almost all modern societies, whether they be relatively free from state control or rigorously socialistic, prices are used to guide the economy into optimum, or supposed optimum, utilization of scarce resources. It should, therefore, be a matter of serious concern to economists engaged in studying or advising the underdeveloped countries to know whether the inhabitants of these countries do respond to price and income incentives in the expected fashion, whether they are indifferent to price, or whether they respond perversely.

Events of the past few years have caused American economists increasingly to concern themselves with foreign economies and cultures. The Point 4 program, the United Nations, the International Cooperation Administration, the World Bank, and the military services have sent American economists into all parts of the noncommunist world as expert advisors on economic efficiency and growth. One important consequence has been that many economists have become aware for the first time of cultures other than their own, and of patterns of behavior startlingly different from those of Anglo-American society. They have come home with stories of all sorts of peculiar, seemingly irrational responses to economic stimuli and innovation. Stories of farmers who refuse to harvest the cotton crop government has required them to plant, or who refuse even to plant the food crops needed for their very subsistence, of cattle that are valued for the shape of their horns rather than for their flesh, of laborers who cannot be induced to work overtime even by attractive bonuses, of consumers who refuse to buy unfamiliar but nutritious foods available at low prices although their supply of the traditional staple is exhausted, of producers who react to higher prices or lower production costs by reducing their output, of prices determined by custom that are stubbornly resistant to changes in supply or demand, and of consumers who spend their money on spectacle frames without glasses, shoes to be worn slung over the shoulders, and nostrums that have no effect other than to turn the urine purple.

Economists who have seen the best plans and recommendations founder because of such seemingly perverse behavior have come home bewildered, confused, and critical of the fundamental propositions of their discipline. Too often they have succumbed to the conviction that what is required is to throw out the entire

existing structure of economic analysis and to start all over again, with new axioms and new concepts of human behavior. Perhaps more common has been the argument that although orthodox economics may be appropriate for western European and American societies, a new economics must be invented for other societies, or even a separate economics for each society.

Economists who have studied the societies of tropical Africa may find it particularly easy to attribute economic backwardness to the absence of economic motivation—of a desire for material things—in a people apparently as different from Europeans and Americans as the African. Just as some nineteenth century Americans denied the Negro a soul in an attempt to justify slavery, so have some twentieth century Europeans denied the African Negro an economic spirit in an attempt to justify colonial rule.

Popular ideas about the economic reactions of Africans are what they are partly because of our sources of information about them:

(1) Anthropologists who wish to counteract what they believe to be an overriding economic determinism and who frequently fail to realize that the economist's analysis is concerned with aggregates, not individuals, and with only one part, not the whole, of human aspirations.

(2) Traders who are apt to find perverse any behavior of clients or customers that reduces trading profits.

(3) Employers who in every land have a pronounced tendency to deplore the disinclination of employees to identify employers' interests with their own, and

(4) Government administrators who may attribute resistance to their recommendations and requirements to anti-social and therefore perverse motives.

Frequently the African of today is equated to Alfred Marshall's savage (*23*), "living under the dominion of custom and impulse; scarcely ever striking out new lines for themselves; never forecasting the distant future; fitful in spite of their servitude to custom, governed by the fancy of the moment; ready at times for the most arduous exertions, but incapable of keeping themselves long to steady work." Like the "savage," Africans are thought to be without economic aspirations and unable to make economic choices either between contemporary alternatives or between the present and the future. In general it is asserted that Africans respond to price changes in an unpredictable fashion, that they either tend not to respond at all, or that they do so in what seems to be a perverse fashion, i.e., when prices rise, less is produced, when wages rise, fewer hours are worked.

If these allegations are true, they of course make impossible the efficient functioning of a free market economy. They also destroy the effectiveness of price manipulation in achieving the goals of a planned economy. If they are true, the only road to economic advancement in Africa, and that a dubious one, is through direct controls on employment, output, and consumption, through the completely authoritarian state in which every economic decision, no matter how detailed, is made and implemented by the planning bureaucracy.

UNORTHODOX BEHAVIOR EXPLAINED

The various kinds of unorthodox economic behavior attributed to African producers and consumers have had for economists the usual fascination of the

bizarre, and whether true or not have been explained as deriving from a variety of alleged characteristics of African society and the African personality. Some of the explanations offered for the African's uneconomic behavior as regards prices, savings, investment, and innovation are summarized briefly in this section.

The simplest explanation offered for unorthodox price response is that Africans are not interested in having any goods and services other than those they now have. If this is so, a rise in the price of farm products, for example, or an increase in output per acre or per man hour, would lead the farmer to reduce inputs until his total net return was no greater than it had been before; elasticity of supply would then be equal to unity, but negative. A slightly more sophisticated statement, that level of living tends to approach the standard of living, causes elasticity of supply to be negative but not necessarily equal to unity. A variant of the same theme asserts that Africans are not unwilling to consume more goods and services, but that they value leisure more, or at any rate so highly as to make their response to price incentives extremely weak.

Another explanation of the supposed failure of supply and demand to respond to price depends on the conservatism of Africans—"the dominion of custom"—that causes them to cling stubbornly to customary usages. The strictures of custom are reinforced by the communal character of African life and by the heavy obligations of each individual to his lineage.

Sometimes irrationality is also given as part of the explanation: not the economist's meaning of irrationality that accepts the ends but questions the means, but the reformer's meaning which questions the ends themselves as irrational—e.g., owning more cattle instead of eating more meat, preferring to consume a combination of foods that do not constitute a "balanced" diet, preferring ceremonials to productive investment, or indeed any pattern of tastes differing sharply from the European.

Finally, the failure of prices to perform their expected function is attributed to the African's unfamiliarity with economic exchange in general and with markets and money in particular. Ignorance of exchange in turn is often attributed to the fact that Africans live in self-sufficient economies, or did until very recently, in which the household was able to supply all of its own needs. It is argued that because Africans are ignorant of exchange, prices do not react to changing conditions of demand and supply and buyers and sellers stubbornly adhere to traditional prices long after they have ceased to be appropriate. One consequence of the unfamiliarity of Africans with markets is the phenomenon known as target demand, a demand for money "largely derived from a demand for specific things for which there is a felt need" (*24*), in a society in which the necessities of life can be obtained without money.

It is frequently asserted that Africans either cannot save, or will not. Failure to save prevents accumulation of resources for investment that would increase output and spark the process of economic growth. Improvidence also is said to lead to overconsumption of foodstuffs, sometimes in the form of beer, in the months just after harvest, and to a "hungry gap" when supplies have run out and the new crop is not yet mature. Irrational consumption of useless goods is another consequence.

Some reason that the African does not save because he lives only for the

present and is unable to visualize the course of events ahead, or because he is fundamentally irresponsible, and assumes that others will take care of him if trouble comes. The security offered to the individual by communal life, it is said, relieves him of the strict necessity of providing for himself or building his own insurance against disaster.

A more mechanical economic explanation for failure to save is also offered, based on the assertion that incomes are so low as to provide no surplus over the bare necessities of life. Under these circumstances savings can be achieved only by reducing consumption below the minimum required for survival. Preharvest food shortages are explained in the same fashion as due to failure to produce food enough to last the whole year through.

Or again it may be argued that even the productive individual cannot accumulate an excess above his own requirements because of the heavy demands of members of the extended family. When an individual earns more than his minimum requirements he can neither save nor much increase his consumption; instead he must provide food, clothing, and shelter for an ever larger number of relatives.

Saving, in its simplest sense of postponed consumption, is not enough to bring about an increase in the economic output of a society; the savings must also be employed in such a way as to increase the productive capacity of the existing stock of labor and land. But, it is asserted, even when Africans are able to save a little, they do not invest their savings productively. Either because their time horizon is so short, or because they place such high value on consumption, wealth is saved for a time only to be dispersed in an excess of consumption: a beer drink, a feast, a religious ceremonial, in elaborate clothing and housing, or an additional wife.

Perhaps just as important to economic advancement and efficient utilization of resources as saving, investment, and appropriate response to cost and price differentials is the willingness of a people to adopt new and more economical methods of production, or to invent them. Reports of colonial administrators, however, contain frequent references to the stubborn resistance of Africans to change, even when clearly to their advantage. The notion that Africans in general and African farmers in particular tend to reject everything that is new, the idea that African life has remained changeless through the ages, is found consistent with the rule of custom, the rigidities imposed by communalism, the disinterest in material welfare, and the supposed inability of Africans to envisage the future outcome of present action.

It is apparent from the foregoing that most explanations of unorthodox economic response in tropical Africa rest upon notions about personality—individual economic aspirations and rationality—and about the structure of African societies —the extent of tribal ties and of economic ties. Economic aspirations are said, on the one hand, to be so low as to be satisfied with minimum effort, on the other hand, to be so high as to cause all income to go into current consumption. Irrationality manifests itself in exaggerated time preference and in erratic, impulsive consumption. The strong bonds between the individual and the tribe are believed to result in loss of self-reliance, inventiveness, and ambition. And in the

self-sufficiency of small economic groups is found both a cause and a consequence of the African's unfamiliarity with the workings of economic markets.

These explanations seem plausible; whether they are correct and whether the phenomena they purport to explain are real is another matter. The following pages present a number of accounts of the behavior of Africans in actual market situations, accounts demonstrating that economic man is no stranger to tropical Africa and strongly suggesting that, given full opportunity to pursue his personal objectives, he can be relied on as a powerful agent to move African economies to greater productivity and wealth. Innovation has been discussed in another place (*17*), where it has been shown that Africans have been not at all reluctant to adopt new methods of production when they saw clear economic advantage in doing so.

EXCHANGE

If Africans in fact had always lived a Crusoe-like existence, providing by their own labor all that they consume, and knowing nothing of barter or trade, or of specialization in production, they might have been expected to behave erratically when first introduced to an exchange economy. Even if exchange was a familiar institution in tropical Africa, it might nevertheless have been conducted according to principles sharply at variance with those believed to govern elsewhere. Economic exchange as understood in the western world implies both "a mutual and voluntary transfer of property" and "a fundamental equivalence in the things exchanged . . . which rests upon economic rationality" as well as upon "developed market institutions" (*19*). We shall here argue that exchange of goods and services is an old and familiar practice in Africa, and that in this exchange can be seen operating the same sort of demand and supply responses customarily postulated by economists.

Trading ties between tropical Africa and Eurasia are very old, dating back at least to the time of Christ and probably much earlier. There is ample evidence of the trade in gold, leather, ivory, ostrich feathers, and slaves across the Sahara from West Africa to the Mediterranean, and of a similar trade up the east coast to Egypt, Arabia, and India. More interesting for our purposes is the commerce between Europeans and Africans that has flourished on both coasts since the fifteenth century A.D. At the outset this was primarily an exchange of goods: the gold and silver, ivory, hides and skins, wax, gums, and ambergris of Africa against the woolen cloth, iron pots and weapons, and the jewelry of Europe. Only later did it become primarily a trade in human beings. Whether the trade was in goods or in slaves it was carried on by Africans as well as by Europeans. Slaves were captured or purchased in the interior and brought down to the coast by African traders who engaged in the trade for gain. Merchandise was carried from market to market in its journey to the coast, often passing through many hands before it reached the holds of European ships.

This is a familiar story, but it needs to be stressed that the exchange of African goods and slaves for European goods was economic exchange in every sense. The goods brought down from Europe to the west coast or from Arabia to the east coast were wanted by the people of Africa, and wanted badly enough so that

Africans were willing to go to considerable trouble and to give up some property in order to get them. Furthermore, prices, or the rates at which goods and slaves exchanged, were not rigid but varied with supply. True currencies probably existed in few places, but various forms of quasi currencies such as salt, tobacco, cloth, shells, beads, iron rods and bars, and copper rods, wire, bars, and ingots, facilitated this exchange. As the quantity of these currencies increased their value diminished accordingly.

Less is known about internal trade prior to European exploration of the interior of the continent in the middle of the nineteenth century. Internal trade in export commodities was undoubtedly extensive in the region of the sudanic kingdoms of West Africa, and may have been in parts of East Africa. In the eastern part of what is now Southern Rhodesia, Fernandes reported visiting in 1515 a great fair, "as big as any you can see anywhere," to which Arabs and Africans brought their goods and in which the only money was gold by weight (*25*). Certainly gold produced in the interior was bought and sold on the markets of the east coast before the year 1000 A.D. And gold, unlike slaves, could not easily be got by sporadic raids into the interior. Inland from the Congo coast, tribes holding a monopoly of the transit trade interposed as effective a barrier to penetration by Europeans as did the hostile physical environment.

When Europeans finally explored the interior of the continent in the nineteenth century they found markets being held regularly in most areas. Frequently something like a market peace protected travelers to and from the market place even though they passed through hostile tribes and villages. David Livingstone graphically describes such a market just west of Lake Tanganyika (*22*):

> The market is a busy scene; every one is in dead earnest; little time is lost in friendly greetings; vendors of fish run about with potsherds full of snails or small fishes, or young *Clarias capensis* smoke-dried and spitted on twigs, or other relishes, to exchange for cassava roots dried, after being steeped about three days in water; potatoes, vegetables, or grain, bananas, flour, palm-oil, fowls, salt, pepper. Each is intensely eager to barter food for relishes, and makes strong assertions as to the goodness or badness of everything; the sweat stands in beads on their faces; cocks crow briskly, even when slung over the shoulder with their heads hanging down, and pigs squeal. Iron knobs, drawn out at each end to show the goodness of the metal, are exchanged for cloth of the muabé-palm. . . . With so much food changing hands among the three thousand attendants, much benefit is derived; some come from twenty to twenty-five miles. The men flaunt about in gaudy-colored lambas of many-folded kilts; the women work hardest; the potters slap and ring their earthenware all round, to show that there is not a single flaw in them. . . . The roundness of the vessels is wonderful, seeing no machine is used. . . . It is a scene of the finest natural acting imaginable. The eagerness with which all sorts of assertions are made—the eager earnestness with which apparently all creation, above, around, and beneath, is called on to attest the truth of what they allege—and then the intense surprise and withering scorn cast on those who despise their goods: but they show no concern when the buyers turn up their noses at them. Little girls run about selling cups of water or a few small fishes to the half-exhausted wordy combatants. To me it was an amusing

scene. I could not understand the words that flowed off their glib tongues, but the gestures were too expressive to need interpretation.

African traders travelled by canoe throughout the Congo Basin, both through the rain forest itself and the length of the tributaries crossing the grasslands, carrying ivory and slaves downstream and guns, spirits, cloth, beads, and metal goods upstream. Along with this long-distance trade there must have been some trade in provisions. On the Congo and its tributaries fishermen appear to have been the first traders, carrying their catch to markets on higher ground back from the river to exchange for manioc, bananas, palm oil, and other products of the agricultural villages, and for pottery, iron, and copper objects of local manufacture. The Bafourou and the Likouba ascended the Alima River in the French Moyen-Congo a distance of as much as 150 miles to buy manioc for sale to the villages along the Congo River, carrying their merchandise in large canoes with capacities of up to five tons (*3*). This type of trade may have been general throughout the Congo region before it was disrupted by slave raids of the Arabs and trade monopolies granted by the Europeans.

In West Africa the trading tradition was stronger and less easily interrupted by colonial rule. Domestic products of high value still travel long distances entirely outside the European channels of trade. More or less typical is the southward movement of fish caught in the fresh waters of the upper Niger River in exchange for kola nuts from the coastal region of the Ivory Coast. According to Jean Tricart this trade travels along routes established long before the French occupation, when the main flow of trade was toward the sudanic cities and across the desert. Now the flow is reversed. As Ivory Coast farmers have enjoyed increasing prosperity from the production of coffee and cocoa for export they have become importers of foodstuffs from the north, principally dried fish and cattle on the hoof, and the northerners thus obtain funds to buy kola nuts and imported goods from the south. The Ivory Coast produces annually about 30,000 tons of kola, representing a return of about 1.5 billion C.F.A. francs annually, but price for the grower is extremely speculative, depending as it does on arrivals at the distant markets of Bamako in French Sudan and Bobo-Dioulasso in Upper Volta (*33*).

Cities throughout tropical Africa are today provisioned primarily by African producers and African traders. In West Africa a prosperous trading class has grown up, its members handling all stages of food collection and distribution, from assembly of truckloads in small rural villages to retail sale in urban markets. The speeding trucks of African merchants, each carrying its own fanciful banner across the cab, and each representing a substantial investment of hard-won savings, are a characteristic feature of most West African cities. Leopoldville, capital city of the Belgian Congo, and Brazzaville, its sister city of the French Congo, are similarily fed by African merchants, some of whom have grown wealthy and influential from the trade. In eastern Africa, too, where Indian middlemen tend to monopolize trade, the enterprise of Africans is often sharply evident. W. V. Brelsford's account of the trade in fish from the Bangweulu swamps shows that even in such supposedly backward areas the Africans may be possessed of considerable commercial skill and initiative (*2*).

Although M. J. Herskovits asserts that markets were unknown in East Africa

before effective European occupation, certainly trade was not. The Portuguese in Mozambique traded for gold brought from the interior long before they themselves had penetrated much beyond the coastal plain, and there is some reason to believe that this trade antedates the first Portuguese voyages by perhaps 1,000 years. The Arabs found Africans ready to trade slaves and ivory when they advanced into East Africa, and J. H. Speke's account of his encounters with village and tribal chieftains throughout Tanganyika and Uganda in the late 1850's and early 1860's makes it eminently clear that the usages of trade, and transit taxes, were well known (*27*). Reports from other early explorers confirm this impression.

Absence of markets is not to be taken as indicating absence of trade. According to an administrative report by the Chief of the Circonscription of Djoué in 1916 (*8*), the great Batéké Plateau in the French Congo was characterized by an absolute absence of markets. The causes he advances were the hostility of the Batéké to foreigners, the sparsity of population, and the Batéké's *great enthusiasm for trading*. "Free, independent, patient, and silent, he rarely frequents the noisy markets of the Bakongo where transactions must be completed on a fixed day and in a relatively short period of time. The Batéké loves discussion and he will haggle for whole days before deciding to buy or sell a modest amount of merchandise" (*8*, p. 95).

The most active trade in tropical Africa, and the one in which most persons participate, involves the transfer of food and other merchandise over distances of only a few miles. Local markets are perhaps most highly developed in West Africa, where increasing specialization in production of cash crops has made many farmers dependent on purchases for a considerable part of their food supply. But exchange of goods and services within the village or among groups of villages appears to be a traditional activity and has been described in all parts of Africa. Exchange often takes place even within the biological family, division of labor by sex giving rise to some products that are the property of women, some the property of men. And within the village, from very early times, some who were more skillful in working iron or wood, or in invoking the aid of the supernatural, or in artistry and design exchanged the product of their specialized skill for goods in kind or for services.

There can be little doubt that Africans have long understood exchange, and have practiced it, although the conditions under which it was carried on and the rules governing it may have differed from those familiar to western economists. But "mutual and voluntary transfer of property" may not be economic exchange if the equivalence in the things exchanged does not rest upon rational economic choice by the individual trader. It will certainly be a much different kind of economic exchange if the participants are indifferent to material things, if they desire no other set of goods and services than they now command, if they have no care for the future, or if they are interested only in goods for consumption. Examination of the manner in which market supply and market demand are brought into adjustment, and the part played by prices in achieving this adjustment will demonstrate whether African producers are motivated in the ways postulated by economists, or whether their behavior is in fact as erratic and perverse as many observers would have us believe.

PRICE RESPONSE

Under the general heading of price response we shall examine adjustments of buyers and sellers within the market itself, and also the adjustments made by producers to both cost and price in order to maximize net revenue.

It would be very comforting to the economic statistician if sufficient observations of prices and of offerings and takings had been recorded for African markets so that demand and supply schedules could be derived from them and the entire matter expressed in neatly quantified equations. Unfortunately this kind of economic information about tropical Africa does not exist, and it is necessary to rely on less precise, although not necessarily less useful formulations. At the same time, of course, we are saved the debate over interpretation of relationships derived econometrically. The evidence to be advanced is based on incidents, perhaps no more than anecdotes, that have been recorded by colonial administrators, agronomists, economists, and ethnographers, in which reactions of economic man are evident.

The first problem of all markets, once the principle that exchange is preferable to expropriation has been accepted, is to devise means by which equivalence in value can be established. Economists have looked with most favor on a system that depends on efficient functioning of a competitive market, in which each trader is free to trade or not as he wishes, and in which no trader controls a large enough supply, or represents a large enough demand, to be able to influence price by his single decision. Other devices for setting prices have been adopted, including monopoly pricing, collusion among buyers and sellers, and prices set by the state so as to implement its own policies or to guarantee a socially defined "just price."

An account of the way in which market authorities in the French Congo in about 1915 assisted buyers and sellers to arrive at an equitable price illustrates the operation of market forces in an exotic and seemingly primitive setting. It also suggests that the market authorities had a reasonably good understanding of these forces (*8*, pp. 108–09; my translation from the French):

The Talisman for Lowering Prices

> When, as a result of any circumstances, either crop failure, or a coalition among producers, foodstuffs attained an excessive price [in the markets of Djoué, near Stanley Pool], the buyers boycotted the market.
>
> In order to constrain the market women to lower their prices, native custom demanded in addition the consummation of a human sacrifice.
>
> For this purpose, the chief who commanded the market designated one of his slaves. He was seized, bound, and led to the market by a rope around his neck.
>
> The notables then informed him of the fate reserved for him and he was served a great feast, generously washed down with many calabashes of palm wine.
>
> During his drunkenness, a grave two to three meters deep was dug and the victim was then taken to its brink.
>
> At this moment the *nganga* entered the scene and made him swear that

the prices of all goods in the market should be reduced. Then, one after the other, all the foodstuffs usually sold in the market were named and, as each was called the victim fixed its price (which was indicated to him by the *nganga*) and a *barrette* was thrown into the air signifying that the inflated price was forgotten.

When all products had thus been passed in review, the natives uttered great cries of joy, a festival was organized, and, on signal from the *nganga,* the victim was thrown into the grave. The earth covered him quickly and the dancers were charged with compacting it; a *Musanda* branch was planted on the grave, guns were fired to summon the populace and above all the vendors, to whom the general lowering of prices was proclaimed.

The *barrette* referred to in the foregoing served as currency before it was displaced by European coinage. It was a small brass rod, about 10 cm long and 2 cm in diameter, worth about one centime in 1915. According to Sir Harry Johnston, there were no brass rods in circulation at Stanley Pool in 1850, but *Manyanga* metal only, these being ingots of copper obtained from the Cataract region. "In those happy days ten cakes of *kwanga* (manioc paste) could be bought for one brass rod. Gradually the equivalent dropped to five *kwanga* for one brass rod, and still the price of the precious food rose, till in 1889 a cake of manioc paste cost fifteen brass rods" (*16*). Johnston does not state that the decline in the purchasing power of brass rods was caused by an increase in the quantity in circulation, but this was almost certainly so.

After the introduction of European currency in this region, the price of manioc continued to rise, although the price change might not have been apparent to the casual observer. In the earliest period kwanga sold three for the franc; in 1950 the quoted price was the same. In the intervening years, however, the size of the kwanga had changed. They had once weighed as much as three kilograms; by 1930 they were typically about 800 grams; and by 1950 they had come down to 500 or 600 grams (*4*). The price per kilogram had risen from 33 centimes to nearly 200 centimes.

Indication that the supply of manioc products in the market responds quickly to changes in demand is provided by events in Togo shortly after World War II. The staple crops in southern Togo are corn grown primarily for domestic consumption and manioc grown for domestic consumption in the form of meal or for export as tapioca. Production of corn and manioc, and manufacture of manioc meal and tapioca (prior to 1953) were entirely by Africans.

After World War II tapioca found a ready market in France, and exports of 2,000 to 4,000 tons a year seemed assured. Then in 1949 American corn rust inflicted severe damage on the corn crop in West Africa. In Dahomey, where rust damage reached its peak in May–September 1950, the price of corn rose 500 per cent (*15*). The result of the corn shortage and consequent high prices is at once apparent in statistics of Togolese foreign trade. Manioc meal was shipped from Togo into Dahomey and the Gold Coast as a substitute for corn meal, and supplies of manioc roots normally destined for conversion into tapioca were diverted to use in the form of meal. Exports of tapioca fell by more than one-half from 1949 to 1950, and almost no tapioca was exported in 1951. Recorded

exports of manioc meal,[1] on the other hand, trivial in previous years, amounted to 7,000 tons in 1950 and 3,000 tons in 1952 (*18*, Table 8-7). With recovery of corn production, exports of meal gradually declined and exports of tapioca recovered to more than their previous level.

From the other side of the continent, in Kampala, Uganda, studies of expenditures by African laborers over a period of years show shifts in consumption patterns in 1953 that appear to be strongly related to price (Chart 1). The market for foodstuffs in 1953 was marked by great increases in prices of bananas, sweet potatoes, and manioc, and by the stability of the price of corn. The general price rise was caused by poor crops in late 1952, resulting from inadequate rainfall; if government had not intervened, corn prices might have risen in the same way as did prices of the other staples even though corn stocks were fairly large. Through government control of distribution and supplies, however, the price of corn meal was kept fairly steady at between 27 cents and 30 cents per pound. In other years this would have been considered a high price for corn meal, but in 1953 it made it the cheapest of all the starchy staple foodstuffs in terms of calories. Government's efforts to hold down the price of corn meal in Uganda markets were greatly assisted by the response of corn growers to the high prices that had prevailed in 1952 when the crop had been short and prices uncontrolled. The administration guaranteed a price of 15 cents per pound to growers, with the consequence that in Buganda the area of the spring crop was at an all-time high of 236,000 acres, or 90,000 acres more than the largest previous crop (*34*). Supplies steadily improved as this crop was harvested.

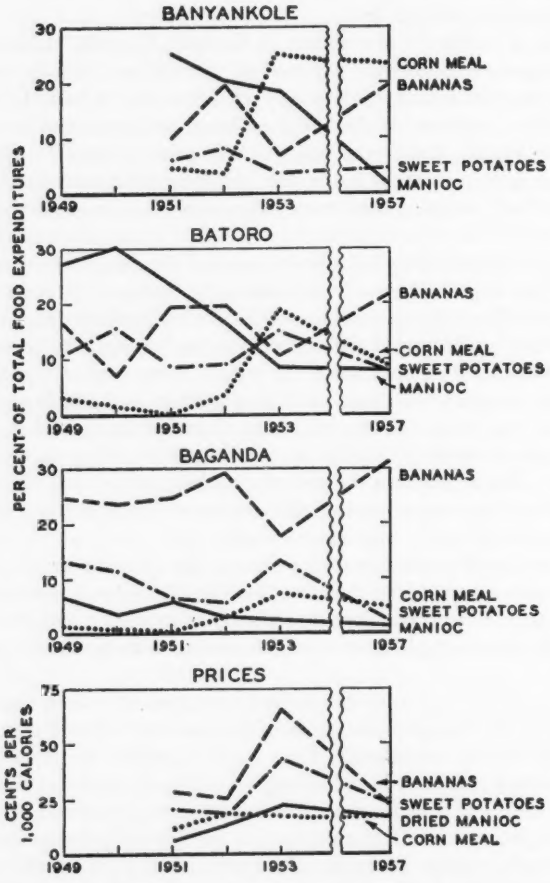
The reaction of purchasers to the general rise in prices and to the relative cheapness of corn varied with the tribe. Traditional food patterns differed sharply, the Baganda relying very heavily on bananas (matoke), and the Batoro and Banyankole consuming large amounts of manioc with bananas somewhat less important.

The Banyankole, who previously had consumed little corn meal, increased their expenditure on this foodstuff about fivefold, and reduced expenditures on bananas and manioc accordingly. Data are not available for years immediately after 1953, but a study conducted in 1957 showed corn meal to have largely displaced manioc in the Banyankole diet, whereas expenditures on bananas had returned to the 1952 level. It could be that the relatively low prices of corn in 1953 provoked a change in the diet that persisted after prices returned to more normal relationships. Lack of information about Banyankole expenditures before 1952, however, makes this sort of generalization precarious.

Batoro expenditure patterns show similar changes in 1953—decline in consumption of manioc and bananas, great increase in consumption of corn. In 1957 Batoro expenditures on corn were much less than in 1953, although greater than in 1949–52, and expenditures for manioc were about the same as in 1953. Expenditures for bananas, on the other hand, were higher than had been reported by any of the earlier surveys. The price distortion in 1953 clearly seems to have affected expenditures in that year, but changes appear not to have been perma-

[1] Exports of meal, destined primarily to neighboring countries, tend to be under-reported because of Togo's long and poorly policed land frontier.

CHART 1.—Kampala, Uganda: Expenditures on Starchy Staples by African Laborers by Tribes, and Average Market Prices, 1949–57*



* Based on Uganda, E. Afr. Stat. Dept., *The Pattern of Income, Expenditure, and Consumption of African Labourers in Kampala: September 1950* (May 1951); Uganda, E. Afr. Stat. Dept., *The Pattern of Income, Expenditure and Consumption of African Unskilled Labourers in Kampala: September 1951* (January 1952); *ibid.*, September 1952 (May 1953); *ibid.*, September 1953 (January 1954); and *ibid.*, February 1957 (June 1957).

nent, except as they may have accelerated a declining trend in expenditure on manioc.

The Baganda, who customarily spent as much as 25 per cent of all expenditures on bananas, compensated for high prices in 1953 by increasing their consumption of corn and of sweet potatoes. Probably the shift from bananas to sweet potatoes should be regarded as an income effect rather than a price effect.

Sweet potatoes in 1953 were much more expensive than manioc or corn but may have been more acceptable to the Baganda because they can be prepared in much the same way as bananas. When the very high prices paid for bananas began to press on income, the Baganda, who were the wealthiest of the three groups, shifted to another preferred food, even though its cost too was abnormally high.

The data obtained by the Kampala expenditure studies are entirely consistent with orthodox notions of economic response. They also suggest strongly that even the most firmly rooted consumption habits can be upset by a sharp change in relative prices.

Reference has already been made to the way in which food farmers increased their output of corn when faced with an unusually attractive price. This is but one of many instances in which output of an agricultural commodity in tropical Africa has responded positively to the stimulus of prices. Sometimes this has produced results contrary to those desired by colonial administrators, as when Tanganyika farmers have found it more profitable to grow cotton and purchase food rather than try to grow all of their own food requirements, or when West African farmers have devoted most of their efforts to the remunerative business of producing cocoa, with consequent curtailment of food farming. To most economists these would appear to be proper decisions leading to economic efficiency, but to those administrators who customarily think in terms of local self-sufficiency they have been most distressing.

In Tanganyika Territory attempts were made over a period of years to achieve territorial, provincial, even district self-sufficiency in foodstuffs, and the African farmers were required by law to grow specified areas of certain staple foodstuffs, even though it was recognized that these crops were economically unattractive. In 1950, for example, the Department of Agriculture report on the Southern Province states (*28*):

> This has been a disappointing year for being self-sufficient within the Province. . . . There were also many local food shortages although most of these were alleviated by internal distribution. Some of the local shortages were accountable to climatic conditions, e.g., floods on the Ruvuma and the erratic incidence of rainfall.
>
> The fact remains, however, that there could have been no such shortages if the rules of cassava plantings had been fully implemented. In a good grain year little cassava is needed, but within the economic range it is a marketable commodity for export. The price is, however, low and compares unfavourably with other crops, e.g., sunflower, cashew nuts and tobacco. It is not, therefore, popular as an economic crop. Unfortunate as it is to have to instigate innumerable prosecutions, it is essential to enforce the rules for minimum plots of cassava as an insurance against food shortage.

Further on, the report complains that "Over recent years the peasant has become increasingly money conscious and has been developing the idea that if you have money you cannot be short of food."

Two years later, however, the departmental report expressed concern over the large crop of manioc harvested in the Newala District of the Southern Province in response to attractive prices, a crop sufficient to provide exports amounting

to 17,000 tons of dried roots. It was recommended that "when other districts are growing sufficient for their own needs it would be best to discourage production in the Newala District to some extent . . ." (*29*).

The impression is clearly given by the official reports that far from being handicapped by the absence of economic man in Tanganyika, the agricultural authorities were embarrassed by his presence. In 1954 they were still placing stress ". . . on the need to plant up adequate acreages of cassava in all Provinces . . ." despite the fact that the Southern Provinces continued to export dried roots overseas (*30*), and despite the fact that in many parts of Tanganyika manioc grows poorly, if it all. By 1956, however, as African farmers in areas where manioc was an economic crop continued to expand output in response to good prices, the Department began to alter its rigid devotion to self-sufficiency, and to apply its rule for compulsory planting more selectively, ". . . more reliance being placed on the greater production of crops for sale where cassava does not crop well" (*31*).

In the Belgian Congo, too, economic man has sometimes thwarted administrators' plans. In 1951 the Belgian authorities were distressed because African farmers found higher returns in the production of cotton and peanuts than in growing food crops. The area planted to manioc in Leopoldville had declined eight per cent, and similar declines had occurred in Equateur, Orientale, and Katanga Provinces. In Kasai and Kivu Provinces, although plantings had increased, much of the crop was left in the field because the price was too low to cover the cost of harvesting. The actions taken by the authorities to increase the supply available in Kasai was not, as one might have expected, to raise the price, but rather to forbid shipment out of the Province, in effect lowering the price (*1*). Similarly in the region of Feshi, where manioc is the principal crop, its sale outside the district is forbidden in order to protect the local food supply (*20*). As a result, a crop that might be sold in order to purchase badly needed higher quality foods is only partly harvested.

Economic African man not only finds himself in conflict with bureaucratic European man in the persons of colonial administrators; his behavior also seems strange and sometimes perverse to agricultural officers who are ruled more by technological than by economic considerations. In the Western Region of Nigeria, the principal cash crop, cocoa, is extremely liable to attack by Black Pod (*Phytophthora palmivora*) which destroys pods and reduces leaf growth (*9*, p. 22). Damage by Black Pod can be much reduced if the cocoa is harvested frequently and infected pods removed. The Department of Agriculture, however, has had only limited success in persuading farmers to pick pods frequently in order to control the disease. Failure of farmers to heed the admonitions of agricultural officers may sometimes be due to ignorance, indifference, or hostility, but the most effective obstacle to general adoption of the recommended methods is their cost. According to Galletti, Baldwin, and Dina, who conducted an intensive study of Nigerian cocoa farming in 1951–52 (*9*, pp. 216–17),

> . . . about 60 per cent. of the cocoa acreage belongs to 20 per cent. of the farmers and the farmers holding this acreage have 5 acres or more each in one village. To control Black Pod effectively these farmers would need permanent labourers throughout the year. But most labourers are migrants and

> few wish to take up permanent work on cocoa farms, especially as wages are not always paid regularly and punctually. Other farmers show little interest . . . because their holdings are so small that the extra income to be gained is not enough to make the effort required seem worthwhile . . . The distance of cocoa plots from the farmers' residence is often great, and to walk 5 miles or so each way every three weeks to remove black pods on half an acre of cocoa does not seem to the Yoruba farmer to be time well spent.

Clearly the reason why the control scheme has not been well carried out is because the marginal cost it entails is greater than the marginal revenue it brings in.

Somewhat similar difficulties were encountered in the Kasai when producers' cooperatives sponsored by the Congo administration acquired small flour mills for transforming dried manioc roots into flour. Technically the mills were satisfactory, producing a clean white flour at lower cost and with less effort than the customary product of mortar and pestle. Nevertheless, deliveries of dried roots to the mills were small, much less than would justify their purchase and maintenance. The explanation was not far to seek. Manioc farmers did not object to the mills themselves, they were not indifferent to their labor-saving advantages, and they were not hostile toward the cooperative itself, at least as far as could be determined. The difficulty was purely economic. Flour produced in the cooperative mills was sold through "modern" trade channels to merchants supplying the cities or to European employers. When sold in this fashion manioc commanded no more than the official minimum price of 1.10 francs per kilo—a minimum become a maximum when offered by large buyers. But manioc sold on local traditional markets to African traders and consumers brought as much as 4.50 francs per kilo (*18*, p. 266). It is not at all remarkable that local farmers preferred to mill their own flour in order to be able to sell it on the local market.

In some parts of tropical Africa, particularly in West Africa, manioc farmers present another sort of riddle to the uninformed observer. In their study of food farms in the cocoa belt of western Nigeria, Galletti and his associates commented on the large amount of manioc that was left in the field unharvested. Harvests yielded only about 45 per cent as much manioc per acre as might have been expected on the basis of crop harvesting experiments undertaken in the Nigerian Agricultural Census of 1950/51, whereas harvests of yams were 80 per cent of expected values, harvests of corn 85 per cent. Similar figures are reported from an agricultural survey in southeastern Ghana in 1952/53 where annual output of manioc averaged only 0.6 tons per acre although yields of 3 to 9 tons were to be expected. In the Ivory Coast, too, an agricultural survey of the Bouaké revealed manioc production to be only a small fraction of what it would have been if all the crop had been harvested.

It might be thought that the apparently wasteful practices suggested by these reports from Nigeria, Ghana, and the Ivory Coast were occasioned by peculiar circumstances at the time of the surveys, and in fact governmental propaganda to grow more food and relatively high prices at time of planting may have been contributory causes. Other information, however, makes it clear that in most years manioc, and taro too, are only partially harvested in many parts of tropical Africa. The general explanation is again economic, and derives from the distri-

bution of the costs of producing these two root crops. It costs little to plant a field of manioc or taro, and the crop can be grown to maturity with a minimum of care. For manioc even land cost is trivial when the crop is grown, as it often is, in fields that would otherwise be abandoned to bush. By far the largest cost of producing manioc and taro is that assumed in lifting the mature roots from the field and transporting them to market. Many African farmers grow manioc as a speculation, to be marketed if the price is high enough when the crop is mature to yield a return greater than cost of harvest, to be abandoned if it is not.[2]

The effect of price on cocoa production in Nigeria and Ghana was long recognized by colonial officers, and it is only in recent years, partly as an apology for activities of the Marketing Boards, that it has been brought in question. Galletti's study of Nigerian cocoa farmers confirms the analyses of West African agricultural officers going back to World War I.[3] Reports of conditions in 1918 and 1919 are particularly interesting because they show that not only does output rise when prices go up, it also declines when prices fall. The following excerpt from the Gold Coast *Report on the Agricultural Department for the Year 1918* describes the consequences of low prices (*11*):

> In the remoter districts all over the country where there was no local market and the cost of transport to the nearest buying centre was more than the produce would have realised, the cocoa crop was left ungathered and the majority of the farms entirely abandoned, some of the owners even leaving the districts in search of employment. This resulted in a deplorable condition of the farms, diseased and squirrel eaten pods of two seasons crop were hanging on the trees together with the fresh young pods, branches attacked by Loranthus parasite, numerous dead and decaying branches covered with white-thread fungus, and occasional dead trees killed by root diseases, all supplemented by a perfect forest of young cocoa seedlings springing up all around, as well as a super-abundance of untended sucker growths.

It should be pointed out that Department of Agriculture officials were not entirely pleased with the consequences of African farmers' economic aspirations. The same report speaks of "the mistaken belief that the larger the area [in cocoa] the bigger the profit" (*11*). Apparently the authorities were disturbed by farmers' pursuit of the good returns that could be obtained from cocoa groves.

With the reopening of trade channels after the Armistice cocoa production began to increase, although immediate recovery from neglect during periods of low prices was, of course, not possible. But the report for 1919 states that (*12*):

> Throughout the cocoa area the revival of the market resulted in a reawakened interest in farms which had been temporarily abandoned during the dormant condition of the industry. The "cultivation" accorded consisted merely of clearing the trees of bush growth in young farms, cutlassing under growth to permit collection of crops, and occasionally a minimum of rough

[2] The practice is closely parallel to that followed in the Salinas Valley in California, one of the most highly commercialized farming districts in the world. There farmers plant lettuce on speculation, only to plow it under when mature if prices are too low to cover harvesting costs.

[3] Cf. also the report on cocoa prepared by the Food and Agriculture Organization of the United Nations in 1955 (*6*).

pruning. Young farms have been observed to be the greater sufferers from war-time abandonment, and in spite of the signs of recovery it is probable that some time must elapse before even pre-war conditions can be generally reported.

During the war farmers had turned their attention from cocoa for export to food for domestic production, but with the return of good prices for cocoa the production of foodstuffs declined. When this shift of inputs became apparent to the Agricultural Department officers their earlier concern over the decline in production of unprofitable cocoa now became a concern over the decline in production of less profitable food crops, and they urged that "departmental effort should be increasingly concentrated on food production" (*12*).

In Ghana and Nigeria official policy forbade the establishment of plantations by aliens, and the local producers have therefore not found themselves in direct competition with European growers. In the Ivory Coast, however, Europeans and Africans alike are engaged in the production of such export crops as cocoa, coffee, and bananas, and have competed in the same markets. Although Europeans were given a privileged position in hiring labor and in marketing their crops until after World War II, the African farmer has more than held his own in cocoa and coffee production, and in some instances has proved to be more skillful in adjusting to changing market conditions than the European.

The cocoa, coffee, and banana plantations of the Ivory Coast are concentrated in the southern forested part of the country where population is sparse and labor in short supply. Shortly after the country came under French control, the government conscripted labor for work on roads, but planters were expected to hire labor from the village chiefs. Labor requirements of European plantations soon began to conflict with requirements of government, and in 1925 the state adopted legislation designed to regulate this competition. The administration of this act was such as to provide the European planters with what was essentially compulsory labor. During World War II it was frankly that. Meanwhile African planters were forced to rely on free labor.

At the Brazzaville Conference in 1944 it was decided progressively to suppress labor recruitment. African planters were delighted, particularly so because during the war years they had been largely cut off from their labor supply. European planters, not unnaturally, were passionately opposed to abolition of this system that had been in effect in one form or another almost since the beginning of European plantations, and they regarded the decision as a direct blow to the development of the entire territory. Nevertheless, all compulsory labor was abolished by law in April 1946.

Fears of Europeans seemed to have been well grounded. Laborers left their jobs en masse, and many European plantations went untended for months, some for as long as two years. Wages had been ridiculously low—from 4 to 5 francs CFA a day as compared with a legal minimum of 105 francs CFA a day in 1955—and it was not until wages were raised and more goods were available in local markets that the plantations were able to resume normal operations. Still the Europeans were not able to satisfy their requirements although the Africans were meeting with somewhat better success.

North of the Ivory Coast, in Upper Volta, the Mossi population provided an obvious labor pool for the southern planters, if only they could be induced to come. The Mossi find their principal employment away from home in southern Ghana where they have gone for many years in response to attractive wages and working conditions. The problem was to divert a larger part of this migration to the Ivory Coast. At first the colonial administration itself assumed this task, but at the beginning of 1950 the Syndicat Interprofessional pour l'Acheminement de la Main-d'oeuvre was organized to take over recruitment for all Ivory Coast planters. The African planters shortly withdrew, believing that the Syndicat discriminated against them, and formed the Syndicat Agricole Africain. It was this organization that solved the labor problem, by the simple expedient of paying the Mossi the same wages and providing them with the same working conditions as they could get in Ghana. The European planters, after having claimed that these conditions of employment would drive them into bankruptcy, were forced to follow the African example once compulsory labor was abolished (7).

Output of cocoa and coffee combined from African plantations increased from a total of 69,300 tons in 1942 to 108,900 tons in 1952; during this same period European output declined from 14,250 tons to 5,800 tons. Although Europeans had been favored by government in labor recruitment, in prices for their product, and even by direct subsidy, they found themselves able to compete effectively with Africans only in the production of bananas, where the special marketing requirements of the fruit probably offered them an advantage.

Migratory travel of laborers is a familiar phenomenon in all parts of Africa and appears to be primarily a response to the desire for economic gain. The migrants are also motivated by the desire for adventure, the lure of far places, and the esteem in which the man who has travelled is held in the village, but these appear not to be the dominant reasons why so many thousands make journeys of hundreds of miles to take employment, often to indenture themselves, in mines and on plantations.

A report from the region of Woleu-N'Tem, which lies in French Gabon in the angle formed by the frontiers of the Cameroons and Spanish Guinea, illustrates the nature and strength of the economic appeal; it also illustrates how rational African behavior can be misinterpreted by Europeans who find its consequences inconvenient. In the early 1920's, Woleu-N'Tem was relatively isolated from the rest of French Gabon, and employment opportunities were few. On the other side of the border, however, in Spanish Guinea, there was great economic activity. But the population of continental Guinea (Rio Muni) was no more than sufficient for the needs of its own agricultural and lumbering industries, and the permanent population of Fernando Po was fully employed. As a consequence, laborers moved steadily from Woleu-N'Tem across the frontier into Spanish territory. The story of the reaction of the Fang of Woleu-N'Tem to the free economic attraction of Spanish Guinea and the compulsion and restriction imposed by the French authorities in Gabon is told by Gilles Sautter (26; my translation from the French):

> The "departures for Spanish Guinea" were the obsession of the French administrators. Each periodic report accorded them a section. On at least two occasions, high functionaries were sent into the neighboring colony to

study the causes of the movement and the ways in which it took place, with the object of combating it more effectively. There is no reliable figure on the volume of this exodus because of its more or less clandestine character. Certainly there were no data from the Spanish side where "it is quite certain that no Fang from Gabon is registered as such, nor under his own name" (*a*). Taking into account the return of some emigrants, it is probable that Woleu-N'Tem lost in a few years many thousands of individuals from its working force.

Why did so many leave? Often the administrative reports gave as cause the "questionable procedures" of the Spanish employers and suggested that these partook more of enslavement than of "recruitment" (*a*). Two points above all were insisted upon: the employment of "recruiters" who crossed the frontier and prospected in Gabon, with the complicity perhaps of Europeans, surely of some of the native authorities; the "advance of a considerable sum of money" (*b*) made to the recruits, which obliged them to renew their engagement at the expiration of the period contemplated. The Spanish government closed its eyes to these practices.

Certain reports, however, sound a slightly different note and without doubt are more accurate: "In the course of the month of August twenty-seven natives returning from Fernando-Po came into Oyem to pay their taxes. They possessed a very fine trunk filled with quality goods, very different from those trade goods [*pacotille*] which are sold to them at home at excessive prices by the factors on the coast" (*c*). Ten years later, "because of import duties and also because of the greed of the merchants, it is estimated that merchandise is 75% dearer at Oyem than at Bata" (*a*). All impressment, all subterfuge aside, these considerations alone explain the attraction exercised by the Spanish possessions on a people among whom the exchange of dowries traditionally absorbs a large quantity of goods and money. When to this is added the geographical proximity, the existence of the same tribes on both sides of the frontier, and the impaired reputation of the lumbering camps of Gabon, the only other possibility of employment and income offered, the movement can be understood even better.

Furthermore, economic considerations are not the only ones that enter into the calculation. Is it astonishing if, at the least entanglement with the French administration, the villagers betake themselves to the side of the frontier where "there is neither census, nor native tax, nor levies, nor native justice" (*a*), where, in sum, the inhabitants "live in the most complete independence" (*b*)? This movement involved not only the displacement of individuals and families; one saw "the desertion of entire villages before unbearable corvees or before tax obligations that were too heavy for a poor area" (*a*). It is without doubt the reason why, in flying over the frontier zone, as we had occasion to do recently, or in looking on the map, one sees more establishments on the Spanish side than on the French side.

(*a*) G. Le Testu. Rapport sur la tournée effectuée en Guinée Espagnole du 26 juin au 7 juillet 1933.

(*b*) J. Jacoulet. Rapport de tournée d'inspection.

(*c*) Région du Woleu-N'Tem. Rapport du mois d'aout 1924.

The Africans involved in the economic transactions described in this section do not appear to have been much different from men everywhere in their response to changing conditions of demand and supply and in their ingenuity in devising satisfactory solutions to new problems. Certainly they show every evidence of wanting to increase their command over goods and services and of going about the business of doing so in a rational way, even when they find their desires to be in conflict with those of the dominant European administration. It seems clear that a great many Africans are well familiar with the workings of markets and know how to participate in them to their own advantage. Participation in markets to the extent described, and effective competition with Europeans in crop production imply some knowledge of the use of savings both as precautionary balances and in investment. Direct information about savings and investment, however, is meager. A few bits of evidence from recent economic studies, bearing both on the African's ability to save and on his willingness to do so, are presented below.

SAVINGS AND INVESTMENT

One of the most commonly offered explanations of why a people do not save, that their incomes are so low as to allow no margin over the minimum required for subsistence, has two possible meanings. If by minimum required for subsistence is meant an amount barely large enough to permit survival, then the general proposition is equivalent to saying that a decline in income would result in starvation and death. If on the other hand minimum requirements for subsistence are defined in terms of what a population conceives to be tolerable, then the general proposition is that the desire for consumption goods is so high as to consume all current production. Put in these absolute terms it seems most unlikely that the proposition is true of any human population. For it implies complete improvidence, complete failure to provide for periods when game may be scarce and crops may be short. In absolute terms, indeed, it implies consumption of all crops at time of harvest. It would also mean a society without tools, without homes, even without clothing, all of which depend on deferment of consumption in order to come into being and all of which furnish consumption satisfactions over a period of months or years. Not to save at all means not to survive.

The extreme form of the proposition that income is at the subsistence level leads to absurd conclusions. But we are not much better off if we try to define minimum consumption in more realistic fashion. A wide range exists, for example, between a minimum cost diet that will barely support life and diets enjoyed by even the poorest human populations. If we attempt to specify a minimum cost diet capable of supporting an individual in "full vigor," new difficulties arise because of the various ways in which that condition may be defined. It is in fact almost impossible to arrive at a definition of subsistence minimum that is useful and that will be generally accepted.

This is not to say, however, that subjective appraisal of levels of consumption, and of capacity for saving of income above some sort of base consumption level, are without value. When consumption records can be obtained they will give indications of "nonessential" consumption and of the extent to which it might be possible to divert income from consumption without harmful consequences.

They may also indicate what level of consumption a population considers as normal or adequate, and make it possible to identify individuals or groups who have incomes sufficiently greater than this normal to permit savings. Another reason given for inability to save, that the claims of the family or lineage are so strong as to compel any individual whose income rises above the modal minimum to share the surplus for consumption by relatives, can only be tested by examining what in fact happens when incomes are at different levels.

Reports of some quantitative studies of income and expenditure in East and West African communities since World War II suggest that there is a large variation in individual and family income, that many Africans have incomes large enough to permit savings of some sort, and that a few with relatively large incomes are able to preserve a substantial part of their income from the rapacity of their kinfolk. These studies also provide information about the kinds of things people buy, thereby providing some indication of the rationality of African consumption.

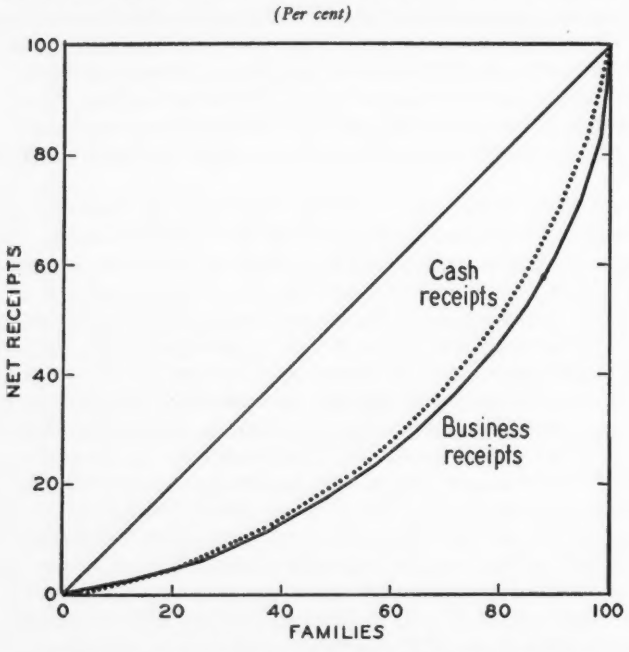
A 1954 survey in the town of Akuse, which is about 60 miles northeast of Accra, reports details of income and spending of 163 families classified according to their total monthly expenditures (*13*). Highest and lowest expenditures by individual families were not reported, but average incomes of each of the ten expenditure groups into which the sample was divided ranged from 174*s*. (20 families) to 1,100*s*. (9 families) per month, or from 55*s*. to 217*s*. per person per month. Expenditures for home consumption averaged 42 per cent of gross income but varied from 26 to 51 per cent, depending primarily on how much of gross income came from resale of purchased goods. Net savings deposits averaged 6.6 per cent of gross income and were reported by 8 of the 10 classes. Cash savings amounted to 4 per cent of gross income for the entire sample but were more than 15 per cent in one of the wealthier classes. Other saving could not be determined because it was included in the general category of remittances paid and received. Savings were said to have been unusually high because the survey was conducted in September and families were beginning to save for Christmas.

The Akuse sample was drawn from all families in the community. It has been more customary to collect information only from the families of wage earners and to exclude families with incomes above a certain level. In the 1951 study of budgets of unskilled laborers in Jinja, Uganda, for example, it was found that 10 men in the sample of 120 were receiving considerable extra income from the sale of beer, giving them a total income almost three times as large as that of the rest of the sample. These ten men accordingly were excluded from the survey (*35*). Such studies show much lower savings. In Takoradi-Sekondi net savings deposits of laborers were less than one per cent of gross receipts, according to a 1955 survey of families with wage incomes of £5–£15 a month (*14*). A similar survey of budgets of unskilled laborers in Jinja, Uganda, in 1952, however, showed net savings of 16.6 per cent of income, with the lower income group saving about 4 per cent of income, and the higher income group, one-fourth of the sample, saving 36 per cent of income (*36*). The very high figure reported for the second group results in part from the fact that these laborers grew an unreported amount of food for their own consumption and this was not included in income.

Surveys of cocoa-producing farmers in Ghana and Nigeria report much higher

absolute savings per family than do the urban surveys, and also greater variation of income. The study of Galletti, Baldwin, and Dina, referred to earlier, reports income in great detail for 187 families in western Nigeria. Net business receipts of these families in 1951/52 ranged from less than £20 to more than £2,000, with 8 per cent of the families receiving 38 per cent of all income (Chart 2). Income

CHART 2.—Nigerian Cocoa Farmers: Distribution of Cash Receipts from Farming and All Business Receipts, by Households, 1951–52*



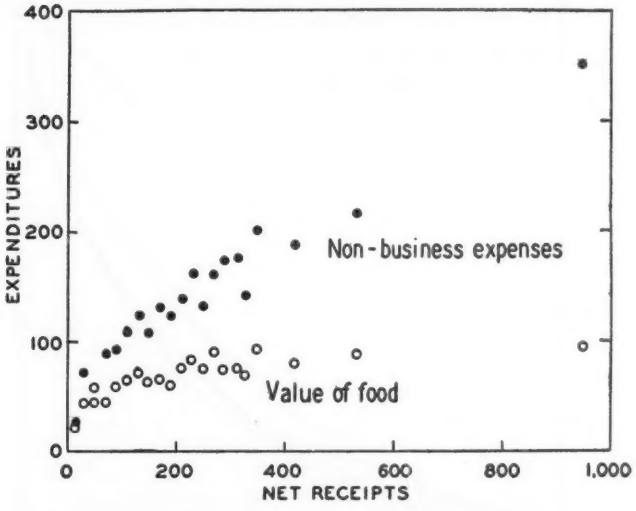
* Based on R. Galletti, K. D. S. Baldwin, and I. O. Dina, *Nigerian Cocoa Farmers* . . . (Nigeria Cocoa Mkt. Bd., London, 1956), pp. 452, 458.

from farming was slightly less concentrated: 9 per cent of the families received 28.8 per cent of all net farm income. Savings amounted to no less than 40 per cent of disposable cash income (*9*, p. 461). Galletti and his associates also provide statistics relating nonbusiness expenditures and expenditures on food to net receipts. As receipts rose, expenditure on food rose to a level of a bit less than £100 per year, but not above that (Chart 3). Total nonbusiness (domestic) expenditures rose more persistently than expenditure on food, but consumed an increasingly smaller part of net receipts.

In southwestern Ghana, a budget survey of 1,000 cocoa-growing families in the Oda-Swedru-Asamankese Area in 1955/56 reports gross earned incomes ranging from under 1,000*s.* to over 15,000*s.* a year. Net income in the lowest class averaged 689*s.*, that in the highest 13,365*s.* Domestic expenditure ranged from 816*s.* in the lowest class to 3,565*s.* in the highest (*10*).

CHART 3.—Nigerian Cocoa Farmers: Net Receipts, Nonbusiness Expenses, and Value of Food Consumed, per Household, 1951–52*

(British West African pounds)



* Based on R. Galletti, K. D. S. Baldwin, and I. O. Dina, *Nigerian Cocoa Farmers* . . . (Nigeria Cocoa Mkt. Bd., London, 1956), p. 473.

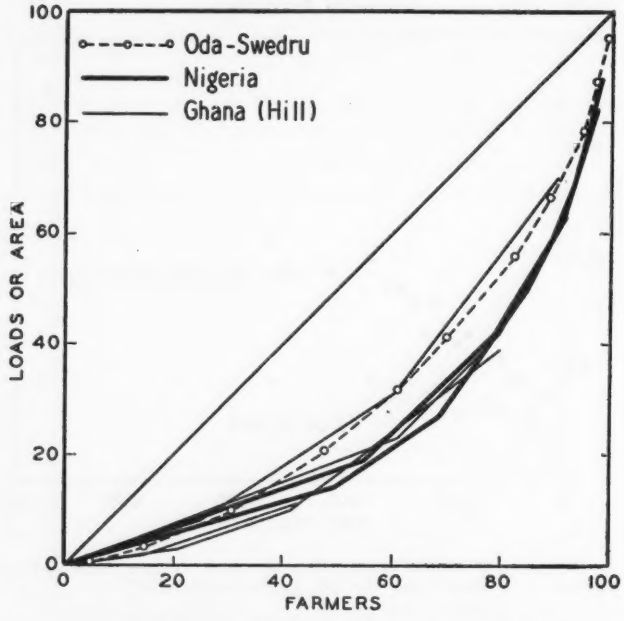
Some information about size of cocoa holdings in Ghana and Nigeria is summarized in Chart 4. Lines plotting cumulative per cent of farmers against cumulative per cent of area or production are grouped fairly closely; in general it can be said that large farms making up 10 per cent of all farms account for from 30 to 40 per cent of acreage and output and the 5 per cent of farms that are largest account for from 21 to 27 per cent of acreage and output. Information from the Ivory Coast shows similar variation in size of coffee farms (*32*, p. 218):

	Per cent of all farms with area less than			
District	2 ha.	5 ha.	10 ha.	25 ha.
1	60	85	95	100
2	36	73	91	99
3	17	41	67	91
4	30	70	95	94.5
5	54	88	96	100
6	32	66	86	92

Property distribution in 54 Tonga households and 60 Ngoni households in Northern Rhodesia, as reported by Phyllis Deane, also fail to confirm the leveling effect of tribalism on accumulation of wealth (Chart 5). The general distribution is not much more equal than those shown in Chart 4, resembling most closely the distribution of income from cocoa in the Oda-Swedru-Asamankese Area of Ghana. Although the value of household goods owned by the Tonga

CHART 4.—Size of Cocoa Holdings, Nigeria and Ghana, 1950's*

(Per cent)



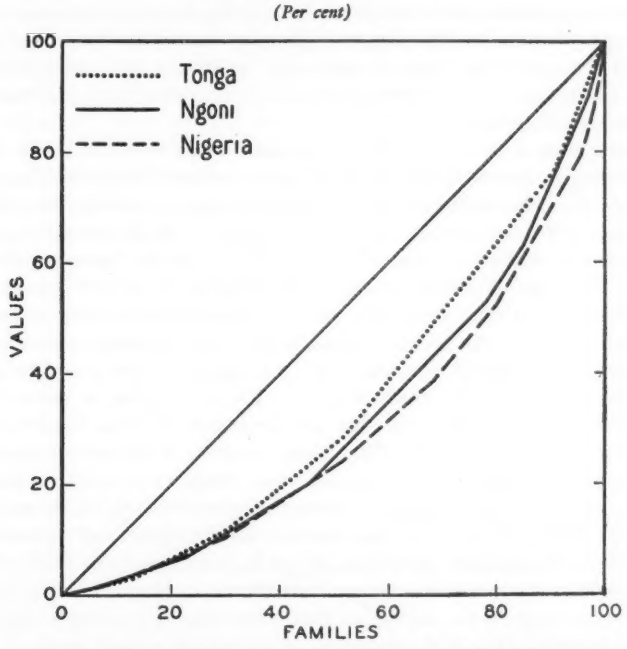
* Sources: Nigeria, area, Cocoa Survey Study, and six villages in economic survey from R. Galletti, K. D. S. Baldwin, and I. O. Dina, *Nigerian Cocoa Farmers . . .* (Nigeria Cocoa Mkt. Bd., London, 1956), p. 150; Ghana (Hill), loads, seven villages, from Polly Hill, *The Gold Coast Cocoa Farmer: A Preliminary Survey* (London, 1956), pp. 89–90; Oda-Swedru, loads, from Ghana, Off. Govt. Stat., *Survey of Population and Budgets of Cocoa Producing Families in Oda-Swedru-Asamankese Area: 1955–56* (Stat. and Econ. Papers, No. 6, July 1958), pp. 70–71.

and Ngoni (less than £50 for the wealthiest household) is much less than the value of durable goods owned by the Nigeria cocoa-producing families studied by Galletti and his associates (up to more than £2,300 per family), the two distributions are much the same.

In the urban budget studies and in the surveys of cocoa producers, loans and borrowing figure prominently. Africans make use of a variety of credit arrangements, many of them of local or traditional origin. They include the "pledging" of cocoa farms in lieu of mortgaging land that is not held in fee, the development and operation of farms on shares, in which one man furnishes labor, skill, tools, and provisions, the other furnishes land and perhaps lends some tools and some food, and money-pooling clubs, such as the *esusu* societies of Nigeria, to which the members make a weekly or monthly cash contribution that is given to each member in turn to make a major purchase. Africans who are provided with food and lodging by their employers may contribute their entire cash wages to such a club.

Evidence is fairly plentiful as to the general existence of income above the

CHART 5.—Value of Household Goods Owned by 54 Tonga Families, 60 Ngoni Families, 1947, and Value of Durable Goods Owned by 187 Nigeria Families, 1951–52*



* Sources: Tonga and Ngoni from Phyllis Deane, *Colonial Social Accounting* (Cambridge, England, 1953), p. 194; Nigeria from R. Galletti K. D. S. Baldwin, and I. O. Dina, *Nigerian Cocoa Farmers . . .* (Nigeria Cocoa Mkt. Bd., London, 1956), p. 165.

"subsistence" level, of some incomes much above modal level, and of some savings, at some times, from incomes of every level; it is not at all plentiful as to the extent, amount, or nature of investment. Money is saved to pay for feasts and ceremonials, for education, for costly items such as bicycles, radios, and trucks; it is also saved as a precaution against future hardship; and it is saved to be invested in productive activities. There seems to be no evidence that money or wealth is hoarded, in the sense of being held simply for the sake of holding it, although some writers so interpret the large cattle herds of certain East African tribes.

Budget studies show that a certain amount of current income goes into consumer durables, amounting to as much as 7.5 per cent of all household expenditures (Oda-Swedru). Items included in this category are such things as furniture, bedding, kitchen utensils, tableware, lamps, carpeting, axes, and cutlery. School expenses, although not large, appear in most budgets. Bicycles and sewing machines, to be used both for pleasure and profit, are familiar African investments. But investments more clearly productive in nature must also represent a substantial fraction of some of the larger incomes. The large fleets of trucks

that carry goods and passengers throughout West Africa are African-owned, as are many of the trucks supplying such cities as Leopoldville and Brazzaville in Central Africa. Perhaps the largest single type of investment, however, is in the form of cocoa, coffee, and banana plantations. Galletti and his associates estimate that in 1951/52 the cost of clearing and planting one acre of cocoa amounted to between £50 and £75. This is a permanent investment that will yield little or no return for the first 4 to 8 years, but that can be expected to yield well for 15 years or more thereafter.

Examination of detailed records of expenditure by families in Dar es Salaam, Jinja, Kampala, Mbale, Akuse, Accra, Kumasi, Sekondi-Takoradi, Western Nigeria, and the Oda-Swedru district of Ghana supplies no evidence that Africans are irrational in consumption habits. The items for which money is spent are just those same reasonable necessities and amenities that the European of similar position might buy. Food bulks large, accounting for at least half of most family expenditures. Clothing, rent, fuel, and light account for another 15 per cent, alcoholic beverages and tobacco around 10 per cent. Expenditures on clothing probably increase with income and may be as little as 10 per cent (Jinja, 1951) or as much as 23 per cent (Oda-Swedru). The items going to make up each major subtotal are not at all peculiar nor particularly African. Examination of imports of consumer goods by the African countries is just as unrewarding to the searcher after peculiar and irrational wants. Imports are today, as they have been for centuries, made up almost entirely of goods that the African does not produce and that he wants for the same reasons European and American consumers want them; cloth, manufactured goods, beverages, some foodstuffs, machinery and equipment, petroleum products, chemicals, bicycles, automobiles, and radios figure large in the imports of most countries. A pressing problem over most of tropical Africa is the providing of useful and wanted goods in greater diversity at prices Africans can pay. Walter Elkan speaks of a "discontinuity in the price range of the things men want to buy" and holds it responsible for much behavior that appears strange in western eyes (5). As the supply of goods increases, and costs of transporting and merchandising them decline, we can expect to see economic desires operating even more forcefully, among more people, to stimulate production and efficiency.

ECONOMIC MAN AND SOCIAL GOALS

Against the illustrations offered here of shrewd adjustment to changing market conditions, of savings and investment, can be brought forth many other illustrations of the sort most often advanced to prove the African's childish lack of understanding of economic affairs. In the United States, too, it would be possible to compile an impressive collection of anecdotes in which the irrational economic behavior of American consumers, even of American businessmen of some prominence, was the theme. But it is not intended to argue that economic motivation is as dominant in the societies of Africa as in those of the western world. All that can be said is that the economic drive is present in a great many Africans who are well able to order their affairs to serve it. And for the purpose of economic analysis this is enough.

Sylvia Leith-Ross, writing over 25 years ago of the Ibo women, found their

preoccupation with material things, and above all with money and prosperity, frightening and disheartening (*21*). Long before that, however, the pioneer economists of France and England perceived how, in a properly ordered economy, the self-seeking of individual members of society could be directed to serve the objectives of all. More than this, in all western civilization as we now know it, economic drive has proved to be perhaps the most powerful force that the state can mobilize to its ends, whether these ends be economic growth, fostering of favored sectors of activity, the preservation of its sovereignty, or world domination.

The question of economic motivation in Africa is of fundamental importance because no other motivation can be substituted for it without great loss in effectiveness. If it is present in a significant degree, even though it may be lacking or muffled by custom in many members of society, conventional analysis will show how it can be fostered and used to serve the objectives of society. If the society is one of economic freedom and economic equality, the efficient producers and efficient traders will displace the inefficient and total productivity will increase. If all members of the society are assured equal access to markets, to resources, and to knowledge, the society increasingly will realize the potentialities of its citizenry and its natural endowment. Or if the society is not economically free but state directed, the planning authorities can utilize economic drive wherever it is present in much the same ways.

It is not the absence of economic man that has put tropical Africa so far behind the great societies of Europe, Asia, and America. He lives in Africa today, as he has for millennia, and will eagerly serve African society as he has other societies when his presence is recognized and his tremendous energies are freed to work for the common good.

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Joseph S. Davis

"FOOD FOR PEACE"

In his agricultural message to the Congress in January 1959, President Eisenhower said:

> I am setting steps in motion to explore anew with other surplus-producing nations all practical means of utilizing the various agricultural surpluses of each in the interest of reinforcing peace and the well-being of friendly peoples throughout the world—in short, using food for peace.

In response to recommendations of Secretary of Agriculture Ezra Benson, the President thus appropriated the slogan, "Food for Peace."

This general idea had already been given currency by Senator Hubert H. Humphrey of Minnesota. He had written a report to the Senate Committee on Agriculture and Forestry entitled *Food and Fiber as a Force for Freedom,* issued as a Committee Print dated April 21, 1958. In this the Senator urged considerable enlargement of surplus disposals of farm products, much more emphasis on foreign policy objectives in this operation, and greater permanence of the program under The Agricultural Trade Development and Assistance Act (Public Law 480, approved July 10, 1954), and urged its administration under a "Peace Food Administrator" in the Executive Office of the President.

On April 16, 1959 Senator Humphrey introduced a bill (S. 1711), sponsored also by 15 other Democratic senators,[1] to give effect to these proposals. Several similar bills were introduced in the House. Hearings on these bills in July 1959[2] and subsequent Congressional discussion moderately influenced the content of the Administration-sponsored bill extending P.L. 480 to the end of 1961, which in amended form was approved September 21, 1959 (H.R. 8609, P.L. 86-341). But important features of the proposed "International Food for Peace Act" were not included.

A still stronger policy is urged in various quarters, especially among church people. This more radical view can be summarized in four sentences: (1) The United States government holds huge and still increasing stocks of wheat, corn, and other foodstuffs, despite various moves to cut down our excessive output of these farm products. (2) Vast numbers of poor people in low-income foreign countries are desperately hungry, year after year. (3) It is our obvious Christian duty to produce all the food we can and to pour out our abundance to all these

[1] Senators Carroll, Clark, Church, Hart, Hennings, Kennedy, Mansfield, McCarthy, McGee, Monroney, Morse, Murray, Neuberger, Symington, Williams (New Jersey).

[2] Senate Committee hearings on S. 1711 on July 7–10, 1959, and House Committee hearings on this and other bills on July 14–29, 1959. S. 1711 was referred to the Senate Committee on Foreign Relations, the House bills to the House Committee on Agriculture.

suffering peoples. (4) Such action would go far to relieve international tensions and to promote the kind of peace we sorely desire. Each of these statements deserves critical scrutiny rather than naïve acceptance.

The *San Francisco Chronicle* editorially expressed a widespread view when it asserted that " 'food surpluses' are a myth as long as over a billion of the world's people are underfed" (*1*). This is false. Actually, it must be emphasized, the huge and growing surplus stocks of wheat and corn in the United States and Canada are a harsh *reality,* since they are remainders from overstimulated output *after* vigorous subsidization of United States commercial grain exports and zealous efforts to supplement these by virtual gifts of very substantial quantities.

The issue between those who broadly support the Administration's program and those who urge going far or very far beyond it is by no means settled. Progress toward the wisest solution is hampered by distortions of facts, omission of pertinent truths, and widespread misunderstanding. This brief paper is offered as a contribution toward clarification of this complicated topic.

I

We are a peace-loving people *par excellence.* Our aversion to war was reflected in our late entry into the first World War and in the fact that it took a Pearl Harbor disaster to stab us into World War II. Nowadays, certainly, Americans hate war and are sincerely, persistently eager for genuine and durable peace. With strong support from our people, the general who led the wartime "Crusade in Europe" has led, as our President, in "waging peace" by all sorts of means. "Food for Peace" is therefore a slogan with powerful appeal.

Especially during and since World War II, Americans have evinced deep concern over the poverty and hunger of people in many nations. Individually, in groups, and as a people, under Democratic and Republican Administrations, we have taken unprecedentedly great strides in expressing this concern in deeds as well as words. Though the slogan "Food for Peace" is new, our Nation has long been earnestly pursuing the policy that it implies, and the broader policy of promoting advances in levels of living throughout the world, particularly in the underdeveloped countries whose people now aspire to achieve revolutionary gains.

If our peace crusade has not yet been crowned with success and what is termed "the cold war" continues, and if vast numbers of the world's people are still ill-fed, these facts reflect the magnitude and obstinacy of these great problems, not weakness of will nor paucity of efforts on our part.

In November 1943 I gave, by request, an address at the 25th annual meeting of the California Farm Bureau Federation on food as an "implement of war" (*2*). In it I reviewed the steps already taken by this country, in conjunction with other food-exporting allies, toward covering the food deficits of the British and the Russians, meeting "the terrible needs in Soviet Union territories recently reconquered by the amazing Red Armies," thwarting the "bitter famine raging in India," and supplying food for civilians following the advancing forces on the Continent of Europe—"to check and prevent starvation, to correct undernutrition or semistarvation . . . , to eliminate serious deficiency diseases, to provide the basis for civil order, restored morale, assistance to our own armed forces, and

economic and political rehabilitation." Recognizing that food can be a "lever for victory," I warned against such extravagant slogans as "Food will win the war and write the peace," "The United States will feed the world," and even "Food fights for freedom."

It was already clear, I said, that "when victory is won in Europe, food will need to be shipped in and distributed on a large scale, to those who have been our enemies as well as to our ruthlessly oppressed friends, in order to clinch the victory and help start the peace." Even then the Council of the new United Nations Relief and Rehabilitation Administration (UNRRA) was sitting in Atlantic City, and the Interim Commission which followed the United Nations Conference on Food and Agriculture was struggling in Washington with the problems of how to transform into reality the superambitious slogan, "Freedom from want" all over the world. I went so far as to say: "Food is not only an implement of war and a lever for victory. It can also become a powerful engine for durable peace. . . ."

This last sentence anticipated one in the President's agricultural message of January 29, 1959: "Food can be a powerful instrument for all the free world in building a durable peace." Better are the milder words used both by Don Paarlberg and by Under Secretary of State Dillon in two excellent recent addresses:[3] "Food can be a powerful ambassador of good will and hence an effective instrument for peace." In the retrospect of the past sixteen years, however, even these words seem too strong. As we shall see (p. 146), "Food for Peace" implies too much. Yet the magnitude and significance of our postwar moves in this area have been unprecedented and outstanding, and should be neither ignored nor minimized by those who urge far greater surplus disposals to hungry peoples overseas.

Postwar relief activities through UNRRA and alongside it, by our Nation and some others, were of major importance and broad effectiveness. Special efforts were required in the late 1940's, when famine threats in Europe led to large-scale emergency food shipments. These, coupled with underestimation of European agricultural recovery, unfortunately also led to reversing the planned tapering off of our wartime price supports and thus to overstimulation of our grain production. Ever since, we have held a "famine reserve" for the world—stocks of foodstuffs, notably wheat, corn, and rice, ample to be shipped when and where famine threatens. We have repeatedly drawn upon this reserve, and it is partly responsible for the fact that there have been no major famines in the past ten years—except possibly in mainland China.

With our essential support, the Food and Agriculture Organization of the United Nations (FAO) has developed into a major international agency for appraising the state of the world's food and agriculture (see 5) and for striving to raise levels of food production and consumption where they are deficient. Its Director General, India's Dr. B. R. Sen, was present at the Conference of Major Wheat-Exporting Countries in May 1959 to promote our "Food for Peace Pro-

[3] The address by Don Paarlberg, Special Assistant to the President, on the Food for Peace Program, given Oct. 7, 1959, is in *3*. That of C. Douglas Dillon, "Building Growth in Freedom: Greatest Challenge of the Sixties," given at the annual convention of the American Farm Bureau Federation, Nov. 17, 1959, is in *4*.

gram" (*6*). Late in 1959, FAO's Conference approved a "Freedom-from-Hunger-Campaign" for 1960–65.

The United States has also wholeheartedly cooperated in creating and supporting the World Health Organization (WHO), the Pan American Health Organization, and the United Nations Children's Fund (UNICEF), and has provided technical and financial assistance to hundreds of health projects abroad through the Mutual Security Program. These have done much not only to cope with epidemics and other health emergencies, but also to stamp out malaria and various other diseases that have long taken a heavy toll of life and working capacity in many parts of the world. The so-called "population explosion" in the underdeveloped countries, indeed, is due mainly to striking reductions in death rates while birth rates continue high. Some two years ago President Eisenhower invited the Soviet Union to join us in the worldwide crusade for improved health (*7*). In February 1960 the State Department set up a permanent Interdepartmental Committee on International Health Policy "for advising the Secretary of State as to objectives, establishing long-range goals, and planning programs in the field of international health" (*8*).

Our Marshall Plan aid to Western Europe (also offered to but declined by Soviet satellites) in 1949–51 included food but was much broader. A magnificent success, it did much to start these countries on a forward economic movement that still has great momentum, as well as to check or to reverse the progress of Communist parties in France, Italy, and elsewhere. The United States has not only pushed our own Point Four Program of aid to underdeveloped countries but has also cooperated in highly promising technical assistance programs through the United Nations and its specialized agencies.

Since 1954, under The Agricultural Trade Development and Assistance Act (Public Law 480), we have gone to great lengths in trying, as Under Secretary Dillon recently said, "to transform our burden into a blessing: to make our mounting surpluses of food and fiber available on special terms or as gifts to friendly countries which need them but which cannot buy them on regular commercial terms" (*4*, p. 856). He went on:

> The results of the P.L. 480 program are impressive. The total value of surplus products sent abroad under it as of last June 30th amounts to about $5.6 billion. If we add to this the value of agricultural commodities programed for shipment as part of our foreign aid program, the total rises to a little more than $7.3 billion. By comparison the total supplied under lend-lease was $6.7 billion and under the Marshall Plan $7.7 billion.
>
> . . .
>
> Over the past 5 years 6 million tons of American surplus have been supplied free to needy people abroad. At the moment more than 60 million persons in over a hundred countries and dependent areas are receiving food as a gift from the American people.

Sales to India under P.L. 480 in 1956–59 totaled nearly $915 million. The Indian Food Minister (S. K. Patil) left for Washington in mid-April 1960 to seek a $1¼ billion contract for 12 million tons of grain to cover estimated deficits

in the next four seasons and 5 million tons for a reserve stock; and to borrow back part of the rupees paid for the surplus grain to increase India's wheat production, to expand grain storage facilities, and to improve distribution methods (9). As we shall see (p. 142), his efforts were successful.

II

Since mid-1954 most of the noncommercial exports of farm products from the United States have been made under the provisions of Public Law 480, by four different procedures under three "titles" of the act. The accompanying table (from *10*, p. 4) shows that more than one-fourth of our agricultural exports in five recent fiscal years were made under this act. These disposals entailed heavy losses to the federal treasury. The greater part of the other exports were made with the benefit of export subsidies in aid of domestic price-support programs.

EXPORTS OF U.S. FARM PRODUCTS, FISCAL YEARS 1954/55 TO 1958/59

(*Million dollars*)

Year	Public Law 480 exports					Other exports	Total exports	P.L. 480 exports as % of total
	Title I	Title II	Title III Donations	Title III Barter	Total			
1954/55	73	83	135	125	416	2,728	3,144	13
1955/56	439	91	184	298	1,012	2,484	3,496	29
1956/57	909	88	165	401	1,564	3,165	4,728	33
1957/58	660	92	173	100	1,025	2,977	4,002	26
1958/59[a]	729	56	138	144	1,067	2,678	3,745	28
Total	2,810	410	795	1,068	5,083	14,032	19,115	27

[a] Partly estimated.

Title I of the act authorized sales for foreign currencies, e.g., for rupees in the case of sales to India, under agreements with the recipient countries. This is by far the largest channel of surplus disposal. Through June 30, 1959, the estimated Commodity Credit Corporation (CCC) cost of food and other commodities programed for export under Title I agreements was $5.1 billion (including ocean transportation) and the corresponding "export market value" (including ocean transportation) was $3.7 billion; but substantial quantities ($453 million as of May 31, 1959 at market value) remained to be shipped (*11*, pp. 66, 68, 70). Foreign currencies have accumulated in the hands of the United States in large amounts, mainly for two reasons. Portions have been used to pay for our own government's expenditures in the recipient countries. Most of the balance is expected to be loaned back to the recipient countries in aid of approved development projects, but the required machinery moves very slowly. Moreover, because of inflation in most of the recipient countries, the domestic purchasing power of the foreign currencies held has undergone considerable depreciation (*11*, Table 11, last line).[4]

[4] Through 1958 the "dollar equivalent" of foreign currencies withheld had been $2,549 million, and the year-end balance was $1,358 million; revalued at the December 31 market rate, the balance was $1,106 million.

Title II of P.L. 480 provided for donations of surplus farm products for famine and other emergency relief abroad, for which provision had earlier been made under Sec. 416 of the Agricultural Act of 1949. This program is administered by the International Cooperation Administration. The amounts so used appear surprisingly small.

Title III of the act provides for donations of surplus food (a) to eligible recipients and outlets in the United States, including schools for lunches, charitable institutions, family units, and disaster relief; and, (b) under Sec. 302, to needy persons overseas, distributed through nonprofit agencies such as CARE and intergovernmental organizations such as the United Nations Children's Fund (UNICEF), chiefly to school children, refugees, and other individuals. Many church people have contributed substantial sums in recent years for this "Share Our Surplus" program. Costs of processing, reprocessing, packaging, etc., and ocean transportation as well, are usually paid by the United States.

Through June 30, 1959, $1,209 million (at CCC cost) had been shipped to foreign countries under Titles II and III, and $1,162 million of food had been distributed in the United States under Title III (*11*, pp. 71–74).[5]

The 1959 amending act added a new Sec. 308 to Title III which specifically authorized donation of CCC stocks of animal fats and edible oils "for use in the assistance of needy persons outside the United States," and even CCC purchase of such products for foreign donation in such amounts as the Secretary of Agriculture determines "will tend to maintain the support level for cottonseed and soybeans" without involving price-support purchases by the CCC.

Title III of the act (Sec. 303) also authorizes so-called barter transactions, for which provision had been made under earlier legislation. These have played a variable part in surplus-disposal operations. At export market values, the total so shipped was $109 million in the four fiscal years ending June 30, 1954, mainly under the Charter Act of the CCC (August 20, 1948), and $1,068 million in the ensuing five fiscal years (*11*, p. 76; *10*, esp. p. 4).

These transactions do not constitute direct barter of grains and other surplus products for minerals and certain other products destined mainly for domestic stockpiles. Surplus farm products are turned over to private U.S. firms, at an attractive price, in return for contracts to deliver, over a period of years, an equivalent value of stockpile materials. The farm products are then sold by the dealers for what they will bring, regardless of where they go, thus competing with ordinary commercial sales of American, Canadian, and other foreign exporters.[6]

The strongest private domestic advocates of barter transactions, according to official testimony, "are those who own foreign mines and smelters, or who are in the business of importing minerals and ores. Its strongest opponents are found in the ranks of those who are exporting American agricultural commodities, and who believe that barter is replacing our normal export business" (*11*, p. 400).

P.L. 480 authorized the creation of a "supplemental stockpile" of strategic and

[5] A new Sec. 306 was added to P.L. 480 by the 1959 amendments, giving authority for a two-year trial of the "food stamp system" long advocated by Senator Aiken of Vermont; but the $250 million per year limit on cost will narrow the scope of the experiment if it is undertaken.

[6] See testimony of Clarence D. Palmby, CCC vice president, before the House Committee on Agriculture, July 28, 1959, in *11*, esp. pp. 399–436.

other materials. The "strategic stockpile" appeared amply justified when it was authorized some years earlier,[7] but the need for it has largely vanished, and increasing portions are being sold while additions keep coming in. The supplemental stockpile is essentially an unnecessary surplus, mainly of minerals, in forms more durable and less costly to store than farm products are. At the end of 1958 its supplies on hand represented a cost of some $458 million, with substantial amounts still to be delivered.[8] Difficult questions involved in its eventual disposition have not yet been squarely faced.

Barter transactions became a source of mounting friction between Canada and the United States in 1954–57. In April 1957 unrestricted barter was abolished, and barter operations were later resumed only under regulations (initially effective May 27, 1957) which sought to prevent interference with normal commercial markets. These safeguards have largely eliminated the friction, but also involved a reduction in the volume of barter transactions (*12*). These declined from $350 million in calendar year 1956, before the new regulations went into effect, to $269 million in 1957, and to $65 million in 1958, then rose to about $150 million in 1958–59. Under the prodding of numerous legislators, who are eager to maximize surplus disposals, Congress has tried to insist on enlargement of the barter program, up to the previous maximum or beyond it. The unofficial but representative Canadian-American committee recently stated (March 1960):

> Despite the recent expansion in U.S. surplus wheat stocks we believe that it is vitally necessary to resist pressures to give barter a significantly greater role by relaxing, as contrasted with merely adjusting, current restrictions. Such extension would inevitably lead to the displacement of dollar sales of both the United States and Canada.

It is amply clear that American food surpluses have been and are being used as a constructive instrument of our foreign policy, and that our government is earnestly seeking to enlarge and improve this use. On this point there is broad agreement in principle between the Administration and those who criticize the administration of the program and urge greater expansion and greater permanence. But experience has clearly indicated several limitations on the extent of wise moves in this direction.

The so-called barter operations have given rise, as we have seen, to legitimate complaints from friendly exporting countries which are subject to what is internationally regarded as unfair competition. The same sort of hazard also arises in connection with much larger sales of surplus commodities for foreign currencies. The scope and content of barter operations have been modified with a view to obviating all reasonable objections. In view of pressures from the Congress, however, it is virtually impossible to exercise care enough in administration to keep these operations consistent with our over-all foreign policy, prominent in which is the promotion of freer commercial international trade and the avoidance of using our great economic power to gain unfair advantages. To a degree that is open to serious foreign criticism, the United States has already secured

[7] Initially by the Strategic and Critical Materials Stock Piling Act (1946), 60 Stat. 597.

[8] Mr. Palmby testified that of the materials received under barter arrangements, about $220 million had gone into the strategic stockpile and a little over $600 million into the supplemental stockpile (*11*, pp. 406–15).

grudging international consent to our extensive export subsidization and our severe import restrictions on competing farm products (see *13*).

Here is the major justification for the current Food for Peace Program, in which this country is undertaking to get a higher degree of international cooperation in dealing with the problems that arise, stressing continuing consultations with friendly exporting countries. An intergovernmental Wheat Utilization Committee, set up after the Food for Peace Conference of May 1959 and representing the major wheat-exporting countries, is undertaking to find ways of maximizing the constructive distribution of existing surplus wheat stocks under conditions that safeguard and encourage expansion of commercial exports. The Departments of State and Agriculture and the International Cooperation Administration are vigorously working on this problem, as shown by testimony of their officials before Senate and House Committees; and on April 13, 1960 the President appointed Don Paarlberg, his Special Assistant in the general area of economics, to be Food-For-Peace Coordinator also.

One of the important potentials has seemed to many to be the building, in food-deficit countries, of national reserves of wheat in particular. This has been long a subject of study within the FAO and its member countries. On February 27, 1957, the United Nations Assembly adopted a U.S.-sponsored resolution favoring grants of surplus agricultural commodities over a 5-year period to help build up and maintain such reserves. Senator Humphrey's "International Food for Peace" bill included specific provisions for promoting this, including grants for building storage facilities (see *14*). These provisions were not included in the 1959 amending act, but the Administration position was that sufficient authority already exists. The American Farm Bureau Federation and American flour millers oppose this move, on different grounds (*14*, p. 140; *15*), but there have been many obstacles to early implementation of such schemes.

Nevertheless, on May 4, 1960, the first P.L. 480 agreement designed to establish substantial stockpiles was signed in Washington. Under Title I of the act, the United States undertakes to ship to India about 16 million tons of surplus wheat (587 million bushels) and 1 million tons of rice (22 million bags) over the next four years. All of the rice and one-fourth of the wheat are to be used to constitute a national food reserve. The aggregate export value is estimated at $1,276 million, including expected ocean transportation costs of $195 million. About 85 per cent of the rupees paid for this grain will be made available to the Government of India for economic development projects, one-half as loans and one-half as grants. The press release announcing this significant agreement, by far the largest single Title I transaction under P.L. 480, observed that "in the case of both wheat and rice, measures have always been taken to assure usual imports from free world sources." While no specific mention is made of consultations with other wheat-exporting countries on this huge contract, it must be inferred that the subject has received serious consideration in the Wheat Utilization Committee in the past year.

III

Initially, Public Law 480 was conceived as a temporary measure, employing extraordinary devices to bring about a rapid disposal of accumulated surpluses,

which were regarded as tending to depress farmers' prices. In this it has failed. The upward trend of surplus stocks, in total and most notably of wheat and corn, has continued despite huge domestic and foreign disposals. Hence the act, at first limited to three years, has been repeatedly extended and broadened, and dollar limits set on its operations increased. Yet its temporary character has continued to be officially emphasized.

Recently, Congressional efforts have been made not only to enlarge the scope but also to make it semipermanent, on the assumption that large agricultural surpluses will persist indefinitely. Senator Humphrey vainly sought to get the authorization to negotiate sales under Title I raised from $1.5 billion a year at CCC cost for two years to $2 billion a year for 5 years. This was in line with a more comprehensive special report in 1958 by John H. Davis, made for the Department of State, which accepted only part of his recommendations (*16*; see also *17, 13*). The 1959 amending act added a new Title IV (Secs. 401–05), which authorized long-term supply contracts and dollar loans at low interest rates up to 20 years; the practical significance of this, however, is doubtful. The American Farm Bureau Federation has supported the Eisenhower Administration in resisting these pressures, and vainly sought to taper off the dollar authorizations for sales for foreign currencies (*18, 19*).

One hard fact Administration spokesmen have been loath to assert publicly. Under the existing "farm program," so extremely resistant to rational revision, the more surpluses we dispose of at home and abroad the greater is the stimulus to production of greater surpluses. Without change in present farm legislation, government stocks of farm products as of June 30 have been estimated to rise from about $9 billion in 1960 to $12 billion in 1963, and costs for transportation, storage, and interest in fiscal 1960 are expected to exceed $1.25 billion (*20*).[9] Only recently have the President and Vice-President spoken out strongly for a drastic overhauling of the indefensible phases of the farm program, but thus far in vain.

In its *Report on the FAO Principles,* dated May 22, 1959, FAO's Committee on Commodity Policy significantly observed:

> While the surplus situation varies from commodity to commodity and from country to country, as a broad generalization it may be said that the movement of agricultural surpluses into export, whether by concessional sales, barter, or donations, has not prevented the further generation of surpluses. Indeed the general effect may have been to delay actions that might have reduced surpluses. If embarrassingly large stocks are reduced through disposals abroad, pressures to correct the generation of surpluses will be less. It is unlikely that there will be any change in this situation so long as governments are prepared to support prices which have the effect of encouraging production substantially in excess of domestic demand and normal exports and then are prepared to subsidize the entry of the resultant surpluses into world trade. Furthermore, the export by one government of substantial quantities at discount prices or through other concessional terms tends to encourage other governments to adopt similar means. This, in turn, may again tend to defer measures to prevent surplus accumulation in those countries.

[9] The $12 billion figure is not there mentioned.

The unofficial Canadian-American Committee already quoted published in October 1959 a statement *Towards a Solution of our Wheat Surplus Problems,* in which it admitted that, "given the circumstances which have contributed to the current congestion on wheat, surpluses of the present order might well exist indefinitely," or even grow larger (p. 2), and expressed the view that "the problem of disposing of surplus wheat has now assumed such proportions, such a degree of permanency, and such a potential for intensified conflicts of interest between Canada and the United States, that new and better coordinated surplus disposal methods should be explored" (pp. 7–8). But it added (p. 10):

> Regardless of what program may be used to eliminate surplus wheat, the Committee emphasizes that there should be no thought of operating it in perpetuity. On the contrary, the general aim should be to restore the balance between supply and effective commercial demand as quickly as possible. There can be no doubt that the present state of serious imbalance, although partly attributable to agricultural technological developments and favorable weather, has also been partly attributable to the various forms of governmental intervention in production and marketing—intervention that exists to a greater or lesser extent in practically every wheat growing country in the world.

The American Farm Bureau Federation asserted in testimony on S. 1711 before the Senate Committee on Foreign Relations (*14,* p. 139):

> We must face the facts. The production of our present surpluses was not motivated by real market needs at home or abroad. They were motivated by the continuation of unrealistic government price support programs. Many of those who have consistently advocated programs that have been responsible for the accumulation of such vast amounts of agricultural commodities now look desperately for any avenue of disposing of them, regardless of the longrun consequence to the American farmers, to friendly nations, or to the U.S. Treasury.
>
> There is evidence that American agriculture is becoming overdependent on Public Law 480 and similar export programs.

The price-support, acreage-allotment, surplus-acquisition, and surplus-disposal "farm program" has dismally failed to achieve most of its objectives, yet there are vested interests in almost every component of this internally inconsistent and extremely costly system. Thus far it has proved politically impossible to make changes sufficient to bring domestic and export market demands and farm output into reasonable equilibrium. While this impasse persists, continuing technological advances coupled with production-stimulating price supports tend to yield increasing surpluses. Few are willing to advocate farmer regimentation drastic enough to eliminate surplus production, or cuts in artificial price supports severe enough to remove incentives to produce more than commercial markets will absorb. Hence the appeal to utilize to the full America's enormous agricultural potential, and to pour out this abundance for the benefit of vast numbers of underfed peoples, even if it should entail still heavier burdens on the federal treasury and further replace economic marketing by government operations.

IV

The extent of world "hunger" or subnormal nutrition is unknown, and there is no reliable basis for the confident assertions that are frequently made about it. It may well be that at least two-thirds of the world's people are ill-fed, if judged by dietary levels now customary in the Western World; but these levels are a comparatively recent development. Conceivably one-half or more of the world's population suffers from some degree of undernutrition, by some defensible standard, but we have no means of knowing. Doubtless large numbers of people in the underdeveloped countries often or commonly go hungry, especially in portions of each year and when local crops fail, and presumably many eat less than would be required to make them efficient laborers.

Such conditions naturally arouse the compassion of well-fed Americans. But falling mortality rates and the notable postwar population upsurges in those countries belie crude impressions that starvation is common and that chronic and serious shortage of dietary calories is well-nigh universal even where poverty is widespread and severe, as in India. To a degree not generally recognized, calorie consumption appears generally adequate to provide subsistence and maintain fertility; and if protein consumption is too low to provide for maximum growth, the consequences are by no means crucial. After long study of reliable dietary health surveys, wherever made, the Food Research Institute's conclusion is, to quote Mrs. Farnsworth (*21*),

> that chronic marked undernutrition with associated adverse health symptoms is rarely encountered as a characteristic of large population groups—that it is mainly to be found among widely scattered, unrepresentative individuals (probably predominantly located in large cities) and to small, unrepresentative, primitive groups whose location, food habits, and cultural patterns are such as to make most of them poor prospects for the utilization of surplus wheat.

If this be true, the extent and degree of chronic hunger among the world's peoples are often grossly exaggerated.

The greatest contribution of our postwar food disposals, including those in recent years, has been in helping to cope with short-run shortages, including prevention of threatened famines. On the chronic undernutrition of such fractions of the world's people as suffer from it, our enormous surplus disposals, however beneficial they have been, have made no perceptible dent. It is hard to believe that doubling or quadrupling the quantities would do much more. And corn, one of our two most intractable surpluses, is not generally acceptable as a food in the poorest countries.

Moreover, just as openhanded charity to individuals—giving to everyone who begs, without any strings—does not strike us today as the best way to help individuals improve their condition, so in international relations a similar practice is very hard to justify. At its recent session, as in one two years earlier, the FAO "Conference again emphasized that, in spite of the continued existence of surplus stocks, in the long run the less developed countries could overcome the twin problems of rural poverty and inadequate food supplies only by building up their own agriculture and developing balanced economies" (*5*, p. 89).

The basic ways to overcome undernutrition and malnutrition, where they are widespread, and to raise levels of consumption and living where they are very low, include raising educational levels, improving technology, curbing excessive population growth, and enlarging per capita output of agriculture and other industries in these countries themselves—not still more lavish gifts of foodstuffs that our Government wants to get rid of. There is even reason to believe that Congressional support for the more effective forms of foreign aid, such as technical assistance, development loans, and carefully devised money grants, is lessened by the politically popular food-surplus disposals.

Furthermore, it is wrong to assume that the countries with ill-fed millions *want* unlimited quantities of our surpluses dumped upon them. Their own producers, like ours, want protection from such dumping, and it is on their increased output that these countries must ultimately depend for raising their food consumption levels. Their pride prevents acceptance of indefinitely greater amounts of open or camouflaged gifts. Their governments rightly fear that, if they become increasingly dependent on such gifts from us for a major part of their food supplies, their efforts to enlarge their own output will be hampered and they will be the more vulnerable if our surplus runs out or there is a change of policy on the part of the United States. The recent ending of the surpluses of cheese and dry milk for overseas shipment has already been the source of serious disappointment to recipients of foreign donations and to the various distributing agencies. And Sec. 307, added to P.L. 480 by the 1959 amending act, specifically assures priority of domestic over foreign donations of surplus foods.

These are among the numerous grounds for giving no serious consideration to extreme proposals that American taxpayers finance our farmers in going "all out" to produce food for the world's billions who would like larger and better diets, paying all other costs involved, and thus radically expanding humanitarian food gifts rather than commercial markets.

V

With certain reservations because of its indirect support of our discredited "farm program," the President's Food for Peace Program deserves broad endorsement, but it should not arouse excessive expectations, especially in respect to the promotion of peace. Dr. Paarlberg indeed said, in his address already quoted: "It may well be that the 'Food for Peace' effort will yield its greatest returns in improved international understanding rather than in sharp increases in the quantity of food moving under special export programs. This, of itself, would be worthwhile."

It is extremely difficult to assess the contribution that our great food shipments have made to the cause of *peace* in very recent years. As part of the early postwar relief and rehabilitation programs and of Marshall Plan aid to Europe in 1949–51, I believe these counted heavily for peace in promoting the extremely impressive recovery in Western Europe and Japan. Prevention of threatened famines in Yugoslavia, India, and Pakistan was certainly important, but its bearing on world peace is not clear. This is true also of alleviations of localized food shortages elsewhere, and of our additions to food supplies in many poor countries.

In the past and present, surely, wars and threats of war have not come from the poor and hungry nations, but from those much better off, under ambitious ruthless leaders. Subject to some reservations about the miscalled People's Republic of China, I expect this to be true in the future.

If all the world's peoples enjoyed adequately nutritious diets, the threat of war would be hardly, if at all, less than now. If all the food surpluses we do or can produce could be effectively distributed to the multi-millions who suffer from undernutrition or malnutrition, there is little or no basis for thinking that these peoples would be lesser threats to peace or, indeed, that their nutritional gains would be lasting. Much greater hope for lasting nutritional improvement will come if it is won by the peoples themselves, with such help as can be given by more prosperous nations and international agencies. The factors primarily responsible for the poverty and low nutritional status in India, for example, include illiteracy, ignorance, underemployment, wasteful marriage and funeral customs, taboos, the caste system, lack of enterprise, primitive technology, and over-rapid population increase. Attacks on all of these causal factors are under way, but some of them cannot be attacked from the outside. Here is no short-term emergency like a famine, but a long-term challenge.

The official report on "Operation of the Mutual Security Programs," for the first half of 1959, refers to a threat to our national security, "more diffuse but no less real" than the Communist one: "This is the explosion that may result if people in the emergent countries are frustrated in their determination to end the squalor and hunger and sickness in which they live" (5, p. 89). This evokes several comments.

The "revolution of rising expectations" or "aspirations" is a major fact of the postwar world. High among the objectives of our national policy is the aim to promote, directly, in cooperation with other nations, and through UN special agencies, advances in the levels of living of other peoples. We have gone unprecedentedly far in this direction and keep striving to go further. As President Eisenhower said in concluding his address in New Delhi, India, on December 11, 1959, "we shall continue to cooperate to achieve a world free from the pangs of hunger, in which families live full and prosperous lives, where friendship among nations replaces fear and suspicion, and where men are free in the pursuit of happiness" (22).[10]

This is all to the good. But the "aspirations" and "expectations" of our people and many others have been raised so high that early fulfillment is simply out of the question, and some degree of frustration is probably inevitable. Nor can we hope to prevent all sorts of "explosions," such as the persisting crisis in Algeria and the current ones in Cuba and South Africa. Most regrettable as these are, I cannot regard them as threats to world peace or to our national security. And the term "explosion" is highly inappropriate and misleading for gradual

[10] In his agricultural message to the Congress, Feb. 9, 1960, the President said:

"The Food for Peace Program, initiated pursuant to my recommendations of last year, has been vigorously advanced. On my recent trip abroad, I saw many constructive results from these efforts and the need and opportunity for even greater use of this humanitarian program. Clearly we should continue to do our utmost to use our abundance constructively in the world-wide battle against hunger. . . ."

disappointment of excessive expectations, as well as for the postwar population upsurge.

Still another illusion is cherished. The wide, persistent, and even growing disparities between levels of living in the more advanced and the less developed countries are viewed, in many quarters, with serious concern, and this concern is among the forces supporting all sorts of American and international efforts to help the poorer countries improve their living conditions. These efforts deserve and enjoy well-nigh universal favor. Some, however, like the Women's International League for Peace and Freedom, go so far as to regard these disparities as "a grave threat to peace."[11] This view I regard as ill-founded. Rather, these disparities must be accepted as hard facts which we must learn to live with, at least for the foreseeable future.[12] They may at times be sources of irritation and disturbing propaganda, but they need be no more so long as stress is laid on progress in improving living conditions everywhere. Impressively rapid postwar population growth by natural increase in most of the low-income countries constitutes one of the most obstinate brakes on their economic advance, whereas such rates are much lower in most of the more advanced countries. But various other deep-rooted factors contribute to the regrettable if not ominous "gap" that even imperfect international comparisons of levels of living reveal.

SUMMARY

No nation has ever approached the liberality that the United States has displayed, during and since World War II, in strenuous efforts to promote world peace and the advancement of other peoples, especially including those with very low incomes and poor living conditions. With broad public support, our government is earnestly continuing these policies, and will surely do more.

Surplus food disposals have played an important part in these efforts. They have met many major and minor food emergencies, and generally yielded valuable results; but they encounter limiting factors, and show no promise of eliminating under- and malnutrition where these are chronic. Here is a long-term challenge that can be met only by helping low-income countries to realize their own potentials. The extent of critical food shortage is not reliably known, but it is often grossly exaggerated.

Our surplus disposals have unfortunately helped to tighten the grip on the Nation of an obsolete and costly farm program overdue for overhauling, and have complicated our relations with Canada and other competing exporting nations whose friendship is vital to us.

The President's Food for Peace Program—new only in name—merits endorsement but should not arouse excessive expectations, especially for its contribution to world peace. Those who would expand it greatly, or replace it by something much or vastly larger, have a heavy burden of proof.

[11] Mrs. Annalee Stewart, legislative secretary of the U.S. section of the League, so testified before the Senate Committee on Foreign Relations, July 8, 1959 (*14*, p. 216).

[12] I expressed this position in December 1949, in commenting on a similar statement by FAO's then Director-General W. E. Dodd (*23*).

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11 U.S. Cong., House, *Extension of Public Law 480: Hearings Before the Committee on Agriculture* (86th Cong., 1st Sess., Series X, July 14–29, 1959).

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21 Helen C. Farnsworth, "The Role of Wheat in Improving Nutritional Status and Labor Productivity in Lesser-Developed Countries," *International Wheat Surplus Utilization Conference Proceedings* (Brookings, S. D., 1959), esp. p. 9.

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E. Louise Peffer

THE ARGENTINE CATTLE INDUSTRY UNDER PERÓN*

Much has been written about the damaging effects of the Perón administration[1] policies on Argentina's agricultural economy. It is more to the point to say that Perón's policies as they affected agriculture were to be highly detrimental to the Argentine economy.[2]

Shortly after his inauguration, Perón awarded to the Argentine Trade Promotion Institute[3] a monopoly of the foreign trade in the country's main agricultural and livestock commodities (wool excepted) so that the profits could be used to accomplish the rapid industrialization of the country and the social objectives to which Perón had pledged himself in his electoral campaign, and, in addition, to subsidize domestic consumption (*1*; *2*, p. 1334; *3*, p. 18). It soon became known that the anticipated profits were to be enhanced by keeping down the costs to the government of products included in the trading monopoly (*4*, p. 30).

At the producers' level the plan worked out differently for cattle than for field crops. The government was able quite successfully to hold down the prices paid to producers of cereals and linseed, but in so doing contributed to a decline in the area planted to them and hence a reduction of exportable surpluses and the profits they were expected to earn for the government. However, the land withdrawn from crops was not withdrawn from productive use. There was more than a commensurate increase in the pasture and forage crop area during the same period. In Argentina much of the best land in the main agricultural zone, the Pampa, is in large holdings, part of which is leased out as relatively small cereal farms; the remainder of the estate land is operated by proprietors as live-

* I am indebted to the Commission for Educational Interchange of the U.S. Department of State and its Argentine counterpart for the Fulbright grant that enabled me to spend six months in Argentina in 1958. During that time, in addition to having access to materials not available elsewhere, I gained insights into the Argentine situation that could not have been obtained from published materials alone.

[1] June 4, 1946–September 19, 1955.

[2] Costs and related matters will be discussed in a companion article, "'Subsidization' of the Argentine Meat Packing Industry," to be published later. This paper deals only with aspects of official policy as it affected one branch of the agrarian economy, but these reveal in general why the government failed in the achievement of its economic goals, and why persistence in pursuing them left a heritage of debt to successor administrations.

[3] *Instituto Argentino de Promoción del Intercambio*, usually referred to as IAPI.

stock, chiefly cattle, ranches. Shifts from one type of farming to the other, depending upon which is more profitable at the time, are typical of Argentine agriculture. If the increased area devoted to livestock had been accompanied by an increase in the exportable surpluses of meat, the government would have been much better able to pay for the program upon which it launched itself so lustily in 1946. But that was not to be the case.

An undetermined but presumably large loss of cattle (and crops) occurred during a protracted drought which began late in 1948, at the beginning of the Argentine summer, extended through 1950, and recurred during the 1951/52 crop year. During most of this time the government was subsidizing meat consumption, boosting wages and social benefits to workers, and otherwise increasing the amount of currency in circulation through lavish expenditures on its own projects. In consequence there was an unprecedented and rapid rise in domestic consumption that led to an enormous increase in cattle slaughter, which, in combination with drought losses, reduced the number of cattle available for slaughter, and hence the supply of beef. Yet it cannot be demonstrated that there was a net reduction in cattle numbers at any time during the Perón regime. Cattle production flourished, but the government did not profit from it. Mistakes and misconceptions at the very outset of Perón's administration, in addition to those already mentioned and in combination or conflict with them, led to consequences that later revisions of policy never succeeded completely in eradicating.

Perón was not an economist. Neither was his first economic minister, Miguel Miranda, who directed the course of the Trade Promotion Institute during its first two years. They appear to have thought that they could set and enforce prices with existing regulatory machinery. In the case of cattle there was already a limited system of official prices—it applied only to steers of export quality—a National Meat Board, and a National Meat Law, Law 11,747 of 1933, which gave the government broad powers to control all aspects of the trade in livestock and meat throughout the country.

OFFICIAL STEER PRICES

The finest types of beef cattle in Argentina had been developed to provide meat for the British and, with the exception of relatively small numbers for the luxury trade at home, had always been destined for that market. Official price schedules were tied closely to those paid by the United Kingdom for meat sold to it under the bulk purchase agreements which had governed the meat trade between the two countries since shortly after the outbreak of World War II.

The first official schedule of prices was announced early in 1941, after the British Ministry of Food had informed the Argentine government that until further notice it could accept only canned meat (5, pp. 20–21). With France out of the war, Germany was exerting the full force of its air and sea arms in the effort to knock out England, and in such conditions transportation and storage of such a perishable item as frozen meat, which made up the largest part of the meat contracted for, was out of the question. Since there was no other export market of any magnitude and since the domestic market could not absorb prime beef at prices the producers were accustomed to receive, the National Meat Board feared that if the emergency were protracted, the quality of herds might not be

maintained, which would jeopardize monopoly of Britain's chilled (cold storage) beef imports after the war. The Meat Board therefore worked out a system of steer classification and carcass grading, which scaled the distribution of payments in accordance with the classification and grades of the steers by quality standards, and not the form in which the meat produced reached the market, i.e., whether as frozen meat, canned meat, meat extract, etc. Although shipments of frozen meat were soon restored, official prices were retained. The meat contracts specified the quantities, types, and grades of the various forms and kinds of meat products to be supplied during a given period, but payments were made to the Argentine government in lump sums for distribution among the exporting firms.

Aside from the fact that it applied only to steers, there were other special aspects of the official Argentine system of steer prices that are central to an understanding of what follows. The prices were guaranteed, but only the meat packing and processing companies engaged in the export trade[4] were obliged to pay them, regardless of whether the steers were to be slaughtered for the export or domestic market. In another respect, the manner in which the official prices applied requires an explanatory digression.

Export packers and processors habitually acquired around 60 per cent of the cattle they slaughtered directly from the producers, a practice that has been called "the distinguishing feature" of Argentine cattle marketings (*6*, pp. 24–25). (Direct purchases are also made by butchers and meat processors who cater exclusively to local trade,[5] but the immediate discussion does not concern them.) Under the direct purchase system each of the companies had established clients, usually big operators whose offerings at any one time would be sufficiently large to provide enough animals to fill a train of cattle cars. The remaining animals required by the packers were purchased at auction, mainly at the Liniers Market of Buenos Aires—the most important in Argentina and reputed to be the largest cattle market in the world today—or the Municipal Cattle Market of Rosario. Small producers of high quality steers, whose scale of operations precluded their participation in the direct sale method of marketing their cattle, favored the Liniers Market because prices there tended to be better than in municipal cattle markets of Rosario, Córdoba, and Tucumán, and in "auction fairs" throughout the interior.[6]

[4] There are 18 such establishments. Fifteen are, to use the Spanish term, *frigoríficos*, i.e., refrigerated packing plants which specialize in shipments of carcass meat (*7*, p. 243). Most of them are in the immediate vicinity of Buenos Aires, although there are two at La Plata, 35 miles southeast of the Capital; one at Zárate, around 70 miles to the northwest; one at Rosario, Santa Fé Province; and one at Gualeguaychú, Entre Ríos. The latter two are the most remote of the so-called *central packing plants*. There are three plants that specialize in meat extracts, canned meat, etc. These are located in central Entre Ríos and are known as the *regional processors*. All but two of the export packing and processing firms were foreign-owned in 1946 at the beginning of Perón's presidency.

[5] The number of cattle involved in direct sales by companies not subject to payment of official steer prices is not separately reported in official statistics but is concealed, along with exports of cattle on the hoof, under the heading "Unregistered Sales." Between 1934 and 1945 the unregistered category averaged 15 per cent of total sales for slaughter, with cattle exports accounting for only a minor part.

[6] The premises of the municipal markets are owned by the cities in conjunction with municipal abattoirs. Except in Liniers, the aggregate of sales in the municipal markets is small in comparison with the totals in Liniers or in auction fairs. In addition to large sales of cattle for slaughter, the fairs sell breeding animals, feeders, etc., and other types of livestock. Auction fairs are conducted at regular intervals, though not necessarily daily, at established locations throughout the interior. They are naturally most numerous where the population is heavily concentrated, which happens also to be in the Pampa Region where by far the largest number of cattle are grown.

On all direct steer shipments from producer to packer or processor the official prices were fixed prices; on purchases made in auctions they were guaranteed minima. What the guarantee meant in the latter case was that although the packers could pay no less in auction than the applicable prices on the official scale, the government did not guarantee to reimburse them for auction prices above official levels. The official prices were meant to be enough higher than auction prices to make them noncompetitive. It was the intention of the Meat Board to pass on to the producers as much as possible of the amounts received from the British, converted into pesos at the official rate of exchange. In arriving at the amounts to be allocated at all stages from farm to ultimate market, the Meat Board limited profits of meat packers and processors and exporters of by-products, in order to leave a wider margin to figure on in arriving at the prices it could afford to guarantee to producers. However, foreseeing that there might be times when domestic demand would push auction bids above the official minima, the Meat Board established a Compensation Fund in October 1941 (*8*) to recompense the packers for any payments above official prices, without cost to the government. A levy of four-tenths of a centavo was charged against each kilo of steer beef exported and this was paid into the fund.

If it should be asked why, if there were an opportunity for producers to obtain higher prices than the guaranteed minima by selling at auction, they did not all take advantage of it, the answer is that producers preferred the direct sale method. It had many advantages: cattle arrived at the killing floor in better condition and at better weights because time was saved and one step in the farm-to-packer movement was eliminated. Also, for every time that auction prices moved above official levels, there had been many more occasions when they fell below.

Enforcement of the official system was a function of the National Meat Board. It supervised all sales in the Liniers and Rosario markets, had inspectors on the receiving and slaughter floors of the establishments to which the official system applied, kept sales records, scheduled export shipments, disbursed to the packers the amounts owing them on meat exported, and saw to it that the packers passed on to the producers the amounts due them after deductions of government taxes and levies.

Not only was the Meat Board apparently well organized to enforce official prices and such other regulations as Miranda saw fit to impose, but the direct sale method for cattle and the orientation of the meat and cattle trade of the country would seem to have been ready-made for his purpose.

The orientation of the commercially significant meat trade was toward Europe, because it provided the most lucrative outlets, important foreign exchange, and support for one of Argentina's leading industries. The orientation of the cattle trade was in the direction of Buenos Aires, where 30 per cent of the country's population is concentrated and in the vicinity of which most of the big packing plants are situated. Liniers auctions and direct sales to the central packers regularly accounted for between 55 and 60 per cent of cattle sales for slaughter in all of Argentina and an even larger share of the earnings.[7] So strong had been the combined influence of exports and the Buenos Aires trade that it was cus-

[7] These assertions are based on statistics of the National Meat Board as published in its annual report for 1957, Junta Nacional de Carnes, (hereinafter cited as JNC), *Reseña Año 1957* (pages unnumbered), and statistical series, originating with the Board, published in the monthly reports by the Dirección Nacional de Estadística y Censos.

tomary to gauge the economic well-being of the cattle industry by the prices paid in Buenos Aires–centered marketing outlets. Formerly, the Liniers Market set the tone of cattle prices for the whole country, while steer prices performed the same function for other beef types and grades, but the official steer prices had replaced the Liniers auctions as the strongest influence on all cattle prices. Miranda appears to have accepted the circumstances just described as being so firmly grounded that nothing could alter the pattern; therefore, if the official rates were set at levels considered remunerative by IAPI, there would be no difficulty in enforcing without greatly altering existing machinery.

MIRANDA AND THE OFFICIAL STEER PRICES

No change in existing controls was made initially by Perón's economic planners. The official prices continued to apply only to steers; they continued to be floor prices; only export packers were required to pay them regardless of whether the purchases were made directly from the producers or in Liniers or Rosario auctions. Enforcement of the system continued to be exercised by the National Meat Board. Only one of its functions was whittled down: the full responsibility of negotiating meat contracts with the United Kingdom.

A new contract was in the offing when Perón came to office, and Miranda was appointed chief of the team to negotiate it as part of a more general trade agreement. Actually, Perón had told the Congress in July 1946 that Argentina would not renew the existing agreement and that "on August 20, at midnight—the moment of its expiry—Argentine steers will have the same value as North American steers, which sell at 600 pesos, whereas the said agreement obliges us to sell them at 200 pesos."[8] Nevertheless, negotiations proceeded according to schedule, and agreement in principle was reached in September 1946. The term of the treaty was to be for four years; the general terms of the new contract (the seventh) were to apply for at least two years, starting with October 1, 1946. Prices to be paid by the British during that period would be "at least" 45 per cent higher than in the first contract (*10*), that of October 1939, which would amount to around 7 per cent higher than the prices in the previous contract, the sixth; "definitive" prices were to be worked out later. In addition, the British made a contribution of £5 million to apply to increased costs of production. Perón's July statement, echoed by Miranda, had been recognized as talking big; nevertheless, Miranda's inability to persuade the British to concede more than 7 per cent as the basis from which to negotiate was interpreted as a diplomatic defeat. Miranda thereupon set his sights on obtaining considerably more in the negotiation of "definitive" prices, those to be paid for each kind of meat according to grade and method of processing.

The British were prepared to bargain. They had asked that Argentina sell them its entire meat surplus, but all they had been able to persuade Miranda to concede was 83 per cent in the first year of the contract and 78 per cent in the second, plus any additional part for which other markets were not found. Neither side was willing to make further concessions—the British on prices and the Argentine on a higher percentage of total meat surplus—until the other had done so. This was the situation toward the end of November 1946, when the

[8] From English translation of the speech in *9*, p. 18.

Argentine Central Bank, of which Miranda was President, unexpectedly published a provisional schedule of new official steer prices to go into effect November 30 (*11*, pp. 5–6), which ranged from 22 to 36 per cent higher than those in force under the sixth British contract. Apparently Miranda thought that if he announced higher price guarantees to the producers than were justified by those the British had been willing to agree to they would be bound to honor them. This is suggested by a cryptic insertion in a statement issued by the Confederation of Argentine Rural Societies shortly after the first announcement of the new schedules: "the temporary prices . . . are to be regarded as a minimum, . . . so that any adjustments that may be made cannot be in a downward direction" (*12*, pp. 8–9).[9] The deadlock in negotiations continued.

The new official prices were not put into effect on the date scheduled. Toward the end of December, Miranda personally ordered that they go into force as of December 30 (*14*, pp. 26–27). Again nothing happened. Not until March 24, 1947, were the packers ordered to pay the new prices, although they also had to pay them on all qualified animals purchased since October 1, 1946, the effective date of the contract (*15*, p. 24). The British had added £2 million of "free sterling" to the £5 million already contributed in the trade agreement in return for Argentina's concession to sell the United Kingdom 83 per cent of its exportable meat surpluses during the two years of the contract.[10]

Even in March the new price schedule was labeled as preliminary, because Miranda was still trying to get better terms. However, when final agreement was announced on May 19, the increase over the sixth contract amounted to only 7½ per cent across the board, plus the two cash contributions totaling £7 million sterling; no change was made therefore in the prices as first announced in November 1946. The prices and donations received from the British did not equal expectations. If converted at the exchange rate then in force, it seems doubtful that they were sufficient to cover the 22–36 per cent higher official steer prices and, in addition, subsidize domestic meat consumption and leave the margin of profits the government had counted on receiving through management of the export trade in meat.[11]

[9] The statement throughout had an official cast; as one periodical commented: "It is nowadays anything but unusual for the public to learn about important government decisions in a decidedly roundabout way . . ." (*13*, p. 6).

[10] Dr. Edith Summerskill, Parliamentary Secretary, British Ministry of Food, and Glenvill Hall, Finance Secretary, British Treasury, on March 4 and 12, 1947, respectively, in *16*, pp. 879–82, 1761–62, 1765.

[11] Available statistics, though good of themselves, are not satisfactory for determining what the rate of increase actually might have amounted to because of differences in composition of the shipments. However, since they are the best to be had for this purpose, we used British statistics of meat imports from Argentina during the 12 months preceding the effective date of the seventh contract as a basis of comparison; i.e., 8,131,500 cwts. at a value of £38,421,800 (*17*). Increasing the value total by 7½ per cent and adding £3,500,000 (one-half of £7,000,000 because the prices established in the contract were to remain effective at least until September 30, 1948) to the resultant figure, and dividing by the volume of shipments during the base period gives a unit value 16.6 per cent above the unit value for the base period. It might easily have been possible, by using the Meat Board's system of allocating bulk receipts to favor steers, to have managed the 22–36 per cent increases in the official schedule, but it is hard to believe that there might have been enough left over to pay for subsidizing domestic consumption and still earn a profit for the government. Incidentally, the seventh contract did not run for two years; it expired on December 31, 1947. By applying the £7,000,000 contribution to the value total (£53,684,200) of British meat imports from October 1, 1946, through the terminal date, and dividing by 8,131,500 cwts., the unit value derived is 18.6 per cent above that for the last 12 months of the sixth contract.

The trade agreement which included the seventh meat contract was superseded in February 1948 by a broader agreement (the Andes), which incorporated the eighth contract, to cover meat shipments during 1948. In it the prices that the British were to pay were worked out by the same method as in the seventh (by consultation after a contract framed in general terms), and averaged around 26 per cent above those of the seventh. In addition, another cash contribution was made by the British, this time of £10 million sterling—135.2 million pesos at the basic rate of exchange—to be applied "towards increased Argentine costs of production" (*18*, p. 14) of the agricultural commodities and meat covered by its terms. Of the total, 92,752,000 Argentine pesos were assigned to meat. None of it, nor any part of the better prices received by the government for the meat shipped under the new terms, was passed on to the cattle growers, who continued to receive for their steers the prices set forth in the schedule based on the seventh contract. Not until August 2, 1949, were official prices increased, retroactive to April 1, 1949, the first change in the official schedule since October 1, 1946. The new list followed conclusion of the ninth bulk contract with the British on June 29, 1949. (For official prices of the top grade of steers, 1945–55, see Appendix Note A Table 1.)

Miranda had left the government on January 26, 1949 (*19*, p. 52), but much earlier than that it was plain that his cattle and meat policies had been arrived at without regard to the economics of market operations and certainly not to those which had been evolving in the Argentine cattle trade for some time.[12]

From the beginning of the official price system in 1941, bids in cattle auctions had tended to climb toward the levels of the guaranteed steer prices, especially since wartime prosperity, the limited supply of consumer goods, a growing population, and a reduction of slaughter-grade cattle between 1942 and 1945 had spurred domestic demand. When the October 1, 1946 steer prices were put into effect in March 1947, they were still above the average auction range in the Liniers Market, which, however, had been moving up in spurts since the new scale was announced the previous November. By mid-May 1947 the auction markets had caught up with and passed official prices.

Even though the cattle cycle was on the upturn, the domestic demand mounted faster under the impact of Perón's program. One effect calls for special treatment, the meat subsidy, which went into effect on January 1, 1947.

THE BUENOS AIRES MEAT SUBSIDY

Perón's strongest support came from the "shirtless ones," the laboring class, and one of the rewards as well as one of the costs he saw fit to pay to insure a continuation of that support was cheap meat. The politically significant part of the labor force was concentrated in the Federal Capital and its environs, yet the meat subsidy in the beginning *applied only to meat sold in Buenos Aires proper.* Buenos Aires is a huge city (the 1947 census reported the population of the Capital itself was in excess of three million; the suburbs added another million), and

[12] Preceding acceptance of Miranda's resignation on January 26, the government had been reorganized. The duties he had held were divided between two new Secretariats: Finance and Economy, and the posts were assigned to two young men, Alfredo Gomez Morales and Roberto A. Ares. described by *The Economist* as "academic economists" (*20*, pp. 662–63).

the amount of meat required to supply its population even without a subsidy is enormous.[13] But all the subsidized meat sales were not to inhabitants of the Capital. Like all large urban complexes, it is surrounded by bedroom suburbs, many of whose citizens work in Buenos Aires. Heads of households who formerly had nothing to do with the purchase of provisions for the family table became buyers of meat and other subsidized foodstuffs on their way from place of employment to station. Housewives or servants from the suburbs deserted neighborhood shops and traveled to the city to buy their supplies. All of this, of course, caused the demand for meat animals to be stronger than it would have been otherwise. But the prices paid in Liniers Market auctions were higher even than the accelerated demand would have induced had it not been for another aspect of government intervention in the meat trade.

Only the concessionaires of the Municipal Packing House of the City of Buenos Aires were eligible for reimbursement of the losses arising from the mounting prices paid for cattle in Liniers Market auctions and the low subsidized prices of beef at the retail level in Buenos Aires. The concessionaires together formed one of the four largest slaughtering operations in the country, but separately competed with each other and with other habitual buyers in the Liniers Market. In December 1946 the licensed concessionaires were "violently dislodged from the premises and from the possibility of slaughtering . . ."[14] and were replaced by four of IAPI's own choosing. Apparently there was no upper limit to the amounts that the Trade Promotion Institute would repay them to make up the differences between the low prices at which they could sell meat and the high costs of operation and of cattle. There was no incentive to them to exercise restraint in their bidding.

With steer prices in cattle markets vying with and frequently above official levels,[15] more and more big producers who in the past had dealt exclusively with the packing companies began sending their cattle to the cattle auctions.[16] Direct sales to central packers dropped by 390,000 head in 1948, with steers accounting for more than 210,000 head of the decline. The companies therefore had to buy more of their steer requirements in the open market at prices above the official level. Receipts into the Compensation Fund (see p. 154) were soon inadequate to the demands upon it; yet Miranda refused to permit overprices on steers

[13] It is difficult to segregate the data for the Capital alone, in terms of the number of cattle required to supply the beef consumed there. Cattle slaughter for consumption in the central packing houses, the national packing house of the City of Buenos Aires, and the abattoirs of greater Buenos Aires was 785,000 head higher in 1948 than in 1946, an increase of 25 per cent. Beef production in these establishments was 123,000 tons (26 per cent) higher (*21*). For the Federal Capital total meat supplies were 19 per cent higher in 1948 than 1946, but there was a decline in mutton and pork production (*22*).

[14] Communication of D. A. Salerno, representing the meat suppliers, to the Honorary Advisory Commission of the National Meat Institute (*23*, p. 35).

[15] "Prices [paid by the companies subject to the official system] for other cattle are said to be free, but show a direct relationship to steer prices. . . . Prices for cows [are at a] 10 to 15% discount from the scale for steers" (*26*).

[16] Aside from the level of prices, there was another aspect of the 1946 official schedule that contributed to higher deliveries of steers to auction markets. No steer was eligible for sale in the two top grades if it dressed out to less than 160 kilograms per side; that is, the animal had to weigh approximately 515 kilograms (1,170 pounds), liveweight, to qualify for sale in those grades, no matter how highly it otherwise might be graded and classified. Since the Argentine taste is for the less full-flavored flesh of younger, leaner animals, there was ample opportunity for producers of choice breeds to dispose of them at auction instead of holding them on pasture until they reached the specified weight.

purchased at auction to be figured in the compensation payments to the packers, as had been the case formerly.

In mid-1948 the companies subject to the official system informed the government that they would buy only so many cattle as current income permitted. They matched their performance to their word. When the government was finally convinced that they were not bluffing, it agreed to a more realistic basis of payments to them (*24*, pp. 5–6; *25*). Nevertheless, slaughter for the export market was so low in 1948 that shipping quotas under the eighth British contract were not met, and this at a time when meat exports had become more important to the government than they had been earlier.

Meat was the one big export item for which the foreign demand remained lively, yet domestic consumption was cutting into export surpluses. It had been the government's intention that the Buenos Aires consumer should be subsidized by meat exports but not at the expense of the export flow. Miranda was in a quandary. Political considerations barred serious contemplation of abandoning the meat subsidy. Yet more meat had to be made available for exportation to counterbalance the falling off of profits on the agricultural staples. The problem was how to eat one's meat and have it too. Direct shipments of steers to the export packers could have been restored to former levels by raising official prices above auction levels, but that would have cut into the anticipated profits that the government had earmarked for itself. Miranda explored the situation with the Minister of Agriculture; the result was a statement to the effect that the suppression of cattle markets was being considered, ". . . since the National Government could guarantee stable prices for these products, as occurs at present with those products originating from arable farms . . ." (*27*, p. 15). A commission composed of economic officials of the government, under Miranda's chairmanship, was appointed to explore how best to accomplish it and, as part of the endeavor, how to improve cattle marketings and other points concerning cattle and meat supplies.

Price stabilization, though implicit in government planning since Miranda became Economic Administrator in 1946, had not before been so explicitly stated as a goal of the official steer policy. Without stabilization, it had become apparent that the high profits on meat exports that had figured in the government's economic plans would be whittled down. The consensus of the government's economic planners was set forth in a communiqué issued in November 1948. They recommended that "all cattle marketed for export should be sold directly to the packers without passing through any market," and noted that additional measures were also under consideration: "the advisability of fixing basic prices, both for home consumption and for export; rules for getting better results from pastoral lands; [and] the necessity of restricting exports of livestock on the hoof . . ." (*28*, pp. 8–9). (Cattle exports had risen phenomenally since 1946.) The next month the government announced that it was contemplating the abolition of the Buenos Aires livestock markets (*29*, p. 20).

What was wanted was to restore official steer schedules to their former influence on cattle prices, but it is questionable whether, even in 1948, the abolition of Buenos Aires auctions could have accomplished the desired end. During that year steer sales in the country as a whole were almost 200,000 head lower than

in 1947,[17] but direct steer sales to central packers were down by 210,000 head (23 per cent) and entries in the Liniers Market by close to 100,000 (9 per cent). Formerly the interior markets would have been the first to feel the effects of a country-wide falling off in steer sales, and the central packers the last. No longer were the official prices, which only the export packers and processors were required to pay, the lure they once had been, but the Buenos Aires meat subsidy, with the fillip it at first had given to Liniers auction prices, was not doing enough for steer prices to overcome the attractiveness of other, formerly less favored markets.

In the circumstances, the contemplated "basic" prices could not have been enforced. The government could not even control sales at its own doorstep. The black market flourished. Slaughter in registered suburban abattoirs rose phenomenally. Clandestine slaughter followed suit, as new slaughter yards began to appear in the suburbs to take advantage of the ballooning demand in the center. Their production frequently reached the customers through the same retail channels that handled the subsidized meat from the municipal plant. Even so, supplies were frequently tight. Attempts of the government to halt the black market trade through pressure on the Union of Meat Suppliers were met with defiance. Whereupon, the government removed the officials of that body (*23*), but to no effect.

This was the situation when Miranda left office in January 1949. The internal effect of his handling of the cattle and meat situation had been to weaken the official price system, the one element in the marketing chain over which there already existed a measure of control when Perón came to power, the kind of control that Miranda belatedly had concluded would have to be applied on a broader scale if the meat export monopoly were to be made to contribute larger earnings to IAPI's funds.

CONTROL SCHEMES FOR CATTLE MARKETS

Miranda's successors acted to recover the ground he had lost. As stated earlier, they raised official steer prices in August 1949 by 35 to 40 per cent, according to grade, in order to revive direct sales. They did not do so, however, until they had abandoned the subsidy for meat sold in the Federal Capital, which was done early in July, in the hope of reducing domestic consumption and the competition for meat animals that it had created. In November they took another action that requires preliminary explanation.

Miranda had come to realize that it was fruitless to attempt to impose price controls beyond the Buenos Aires area because of the shortage of refrigerated storage and transportation facilities. There were some twenty meat companies in the interior equipped with refrigerated storage space (*7*, p. 243), but their facilities were adequate to maintain only sufficient reserves for their immediate vicinities. It was unlikely that they would have submitted willingly to attempts by the government to bring them into a central control scheme. What the

[17] This was probably not clear at the time. Sales records were assembled currently for sales in the Liniers and Rosario markets and direct sales to export packers and processors, but there was a lag in reporting sales elsewhere. Incidentally, the 1948 decline was not caused by the drought, which did not begin to be felt until toward the end of the year, but by heavy slaughter in 1947, the highest since 1941.

government wanted was a series of government-controlled cold storage plants throughout the main livestock zone to serve as centers to which cattle from each vicinity could be shipped directly and from which meat supplies could be distributed as best suited to the purposes of the administration.

The nucleus of such a network already existed. The Meat Law of 1933, in addition to creating the National Meat Board, had provided support for a domestic meat-packing industry to be owned co-operatively by a compulsory organization of cattle producers, whose capital was derived from a tax on all livestock slaughtered in the country (the tax also provided the operating expenses of the National Meat Board). The co-operative, the Corporation of Argentine Meat Producers—*Corporación Argentina de Productores de Carnes*—known as CAP, had not lived up to expectations. Prior to Perón only three small plants had been acquired (*30*, p. 8). Even if wartime conditions had permitted a more vigorous program of development, there was such serious dissension among the major shareholders—shares were distributed on the basis of tax contributions by individual producers—who did not favor building up a big domestic packing industry, and the smallholders, who did, that the government intervened in the management of the organization in 1943 (*31*, p. 5). The intervention was terminated in July 1946 (*32*, p. 1035). While Miranda was pondering the problem of how to restore the effectiveness of the official steer prices without increasing them, he requested that Congress authorize an increase of the Corporation's capital from 100 million pesos to 250 million, in order that it might establish "packing plants in the provinces . . . 'to rationalize' the domestic consumption of meat . . ." (*33*, p. 12). This was done in September 1948.

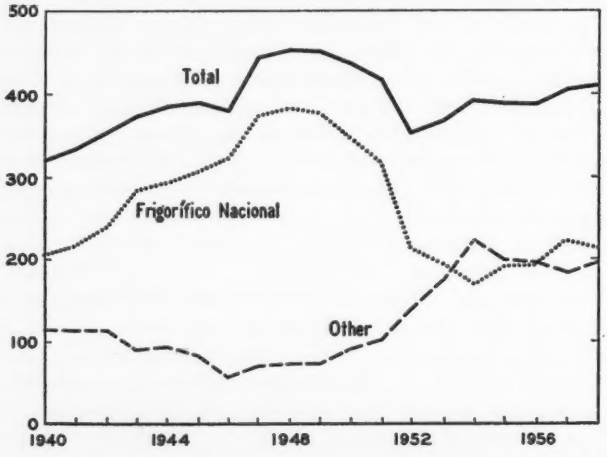
Miranda obviously regarded CAP as a potential instrument of national policy, and his successors made it one. CAP's chief function had been to bid up prices in Liniers auctions whenever they showed signs of a serious fall. When the government canceled the meat subsidy for Buenos Aires in July 1949, meat prices soared, but buyer resistance soon developed, leading in turn to a drop in the demand for cattle and hence in auction prices. This should have been a signal for CAP to spring into action, but this time it did not do so, though not from failure to try. Regarding CAP's relationship with the government as quasi-official and the duty to the shareholders paramount, the directors of CAP found themselves in fundamental disagreement with the economic officials who were determined to hold down cattle prices. Thereupon, early in November 1949, the administration "accepted the resignation" of the managing director, and Perón by executive decree once more intervened in the management of the Corporation. According to the director appointed by Perón, CAP's duty was to make its purchases "at prices the State considers reasonable, without pretending to assume a role greater than the one to which it is entitled nor less than it is obliged to take" (*34*, pp. 15, 29–30).

The meat subsidy was reinstated in November 1949 because, even with lower cattle prices, inflation had caused meat prices to be higher than consumers were prepared to pay. Discontent among the laboring class carried a threat of political repercussions; hence, the restoration of what subsequently were to be known as the "political prices" of meat, but with modifications in scope. The subsidy was extended to the suburbs which together with the Capital came under the desig-

nation "Greater Buenos Aires." Distribution of meat at all levels within the boundaries of Greater Buenos Aires was to be in the hands of licensed vendors, who were required to observe the price limits set by the National Meat Board, which were raised to prevent the rampant consumption of the first subsidy period. The concessionaires of the Municipal Packing House of Buenos Aires were obliged to exercise restraint in their bidding, and other recognized packers in the area were allowed larger participation in supplying the subsidized market. (Chart 1 shows the effects of the January 1947–July 1949 subsidy and of the

CHART 1.—Meat Supplies for the Federal Capital*

(*Thousand head*)



* Based on Dirección Nacional de Estadística y Censos, *Boletin Mensual de Estadística* and its predecessor, *Síntesis Estadística Mensual*. Data for the period 1940–50 from January 1954 issue; for the period 1951–54 from December 1956 issue; for 1955 from August 1957 issue; for 1956 from October 1958 issue; for 1957 and 1958 from August 1959 issue.

favored position the Buenos Aires Packing Company previously enjoyed, together with the effects of the new regulations on the distribution of packing house slaughter.)

Late as it was announced, the new schedule of official prices brought about an improvement of direct sales that made the total for 1949 higher than that of 1948, although the gain was made at the expense of the Liniers Market, not the interior. The improvement was not carried over into 1950, when shipments of steers from ranch to packing house were smaller even than in 1948. In this case, it cannot be said that the decline was attributable to the inadequacy of the official rates. The British contract came up for renegotiation in April 1950 and an impasse on prices developed almost at the beginning of discussions. In what looked like a page from Miranda's notebook, the government raised steer prices on June 7, 1950 to around 23 per cent above the 1949 list. When the British remained adamant, Perón suspended meat shipments to the United Kingdom in mid-July, and they were not resumed until the following April.

Shortly after the export ban was imposed, an administration-sponsored bill was introduced into the Congress for the purpose of giving legal sanction to a set of controls that were an extension of those proposed by the Miranda Committee in October 1948. It called for repeal of Law 11,747 of 1933[18] and substitution of new legislation that would make the government all-powerful in matters relating to the livestock and meat trade at whatever level (*35*, pp. 2957–63).

It goes without saying that the new bill passed. A Livestock Institute was created to carry out "the economic policy . . . the Executive Power may devise" (*36*, p. 13). The levy against receipts from cattle slaughter was doubled in order to provide its working capital; also a part of its capital were the Liniers Market and National Packing House of Buenos Aires, which were transferred to it from municipal ownership. (Since the municipal government of the Federal Capital is somewhat analogous to that of the District of Columbia, the transfer was similar to substitution of one federal authority for another.) Control of interior markets, including traffic in meat and meat animals throughout the country, fell within its province. CAP was to figure in the plan by acquiring abattoirs and refrigerated warehouses to provide the Livestock Institute with the facilities needed in the exercise of its functions.

TEST OF THE NEW MEAT LAW

The test of the new organization began in July 1951. A new meat contract, in which the British conceded a big increase in prices, was signed on April 23, 1951 and led to a resumption of exports to the United Kingdom. Official steer prices based on the new contract were not raised until July 13. Had they been announced in April, they would have been above prices then current in Liniers. However, as soon as the export packers began buying to fill British contract shipping quotas, prices moved up, and, by the time the new official lists were published, auction prices were higher (*37*, p. 5). During the first two weeks of July cattle entries at Liniers had been 30 per cent above those of the same weeks of the three preceding years, yet auction bids soared. Before issuing the revised official prices, the government tried to bring auction prices down by reducing market competition in order to bolster direct shipments to packers, which had fallen off in consequence of the greater attractiveness of the open market. A drastic cut was ordered in slaughter for export orders. Ceilings on subsidized meat prices in Greater Buenos Aires were raised on an average of 34 per cent. And when the new steer schedules were announced they were made ceiling prices (*37*, p. 3).

For almost ten years (October 1941–July 1951), there had been no change in the manner in which the official system worked: for direct sales, the official prices were fixed; in auction purchases, they were guaranteed minima. Under the new order, the only guarantee was on direct sales.

[18] Although Law 11,747 had given the National Meat Board broad powers with respect to trade of the interior, its principal preoccupation had been to protect the interests of producers of export-type cattle. The identification of its interest with theirs was so close that the producers had come to regard it as their organization. This led to conflicts of interest in the Meat Board when the administration adopted a policy of trying to stabilize cattle prices. Since Law 11,747 gave the Meat Board administrative autonomy within the government, it had tried tenaciously to retain its prerogatives and the function assigned to it by existing law, making a new law and a more tractable council necessary from the point of view of the economic planners in the government.

In one respect the new regulations succeeded. Liniers prices plummeted. The volume of Liniers cattle entries did likewise. During the first weeks of August 1951 receipts were so low that they could supply little more than half of the amount of meat normally consumed in the metropolis. Moreover, direct shipments of packers did not revive to the extent anticipated. Therefore, in mid-August meat exports were suspended for two weeks.

For the first time the Capital was feeling the adverse effects of the long drought. To that time the drought had contributed to already large cattle sales for slaughter and exportation, which during 1947–50 averaged the highest of record to that date,[19] as the following tabulation shows (in million head):

1946	7.5	1951	8.6
1947	9.1	1952	8.3
1948	9.0	1953	7.3
1949	9.0	1954	7.6
1950	9.5		

The heavy cattle sales during June and early July 1951 were partially caused by a reappearance of drought conditions. Buenos Aires would have been short of supplies in any event, but the July regulations dramatized a situation that few seemed to have been aware of because the government had halted publication of the official statistical series in 1948 and did not resume publication until early in 1951, with 1950 statistics, and since that time had not carried reporting past the first quarter of 1951 (37, p. 6).

Despite the smaller cattle deliveries to Buenos Aires–centered outlets, the government was convinced that there were cattle to be had. When receipts at Liniers and the central packing plants did not revive materially by the end of August 1951, the government extended the export suspension, but in early September it also issued a set of stringent decrees aimed at forcing producers to ship to the metropolitan outlets and at controlling the black market.

> Slaughter quotas were assigned to abattoirs on the outskirts of Buenos Aires, whose business had soared as sales to the central markets and packing houses slumped; commercial slaughter in unregistered establishments was prohibited, as was also slaughter for home consumption within 50 miles of Buenos Aires; no new slaughter houses were to be authorized. Producers were ordered to ship cattle to the Buenos Aires market according to weekly quotas based upon October–December 1950 shipments, and railway dispatchers were required to help enforce the ruling by seeing that the same number of loaded cattle cars left their stations for Buenos Aires as in the base period (37, p. 12).

Packers were forbidden to buy in auctions; they could buy only from producers on direct consignment. Liniers prices were made the control prices for all auction markets in the country, but, under the new regulations, Liniers auctions were not "essentially governed by the free interplay of supply and demand . . . [but were] under the operation of maximum prices intimated to the market by the

[19] The earlier record had been 8.3 million head in 1924; the average for 1940–45 was 7.0 million head.

National Livestock Institute" (*38*, pp. 21–22).[20] (Presumably the government informed auctioneers just how high bidding was to be allowed to go, but did not publish the limits for fear producers would not send their cattle to Liniers if they knew that the government had imposed ceilings on prices there.) Producers, commission agents, auctioneers, and sales operators in the interior were to be held responsible for observance of control prices there. Defiance of the new regulations, if discovered, would lead to confiscation of cattle (*37*, p. 12).

As with other Perón policies, this one attempted to counteract earlier failures by doing too much too fast. The September decrees were a fiasco, a complete defeat for the government. Cattle arrivals at the Liniers Market came to a virtual standstill until the government, acting on the advice of the Argentine Rural Society, offered special bonuses for immediate shipments to the Capital.[21] There was sufficient response to permit lifting the export ban in mid-October,[22] but even then local supplies remained low.[23]

Monthly entries of cattle during the second half of the year averaged 40 per cent less than in the first six months; for steers, the drop was close to 60 per cent. Liniers steer sales for the whole year of 1951 were slightly higher than in 1950 because of the heavier entries there in the first part of the year resulting from curtailment by the packers of direct purchases during January–April when the embargo on exports to the United Kingdom was still in force.

Cattle sales for slaughter in the whole country were 930,000 head lower in 1951 than in 1950.[24] The decline raised a number of disturbing questions. Were drought losses heavy enough to account for so large a drop? Did the peak marketings of 1950 mean that cattle growers were curtailing production because of the unfavorable prices and conditions imposed by Perón? Questions such as these continued to recur during the next three years. Total sales in 1953 were 2.2 million less than the 1950 record, with only a slight upturn in 1954. What was happening to cattle numbers?[25]

[20] Incidentally, this was one of the few functions assigned to the Livestock Institute by the new regulations, although under the 1950 meat law all of them were within its province. However, a number of other bureaus and agencies were given the responsibility of enforcement. It may have been that the authorities felt that the Institute mishandled the July crisis. Whatever the explanation, the Livestock Institute had a short life. It was replaced the following year (October 1952) by the National Meat Institute. (The old name, the National Meat Board, and functions were restored by the Provisional Government in 1957.) All these changes meant that there were changes in the top echelon, but the structure and the main body of the staff were the same as under the original National Meat Board.

[21] The spokesman of the large producers, the Rural Society, had maintained that they were not defying the government, but at the same time suggested that they might be induced to ship cattle to Buenos Aires if bonuses were offered.

[22] Raising of the embargo was a token gesture. Contract shipments thereafter were never fulfilled during the period covered by an agreement. When the termination of the meat subsidy in Britain in July 1954 was accompanied by abandonment of state trading in meat, the arrears under the final Argentine contract were so large that another year passed before Argentina could take advantage of the free market in the United Kingdom.

[23] Combined Liniers and direct sales in September were close to 80,000 head under Liniers sales for slaughter in September 1950; the combined sales in October 1951 were also less than those of Liniers alone in 1950, but by a narrow margin.

[24] Computed from totals in *39*, p. 96, and *40*.

[25] Perón undertook to provide an answer to the question of cattle numbers by ordering an extraordinary livestock census in November 1952, but it only added to the confusion because it was taken in the Argentine spring when numbers were swollen by the spring calf crop, making it incomparable with earlier censuses and subsequent surveys made at midyear or reasonably close to it. The surveys were based on questionnaires in the major producing provinces, adjusted by spot checks and observations throughout the country.

Cattle Numbers[26]

As the accompanying table shows, between the census of May 10, 1947 and the survey on June 30, 1954 the cattle population is estimated to have risen by 2.5 million head, averaging around 356,000 head per year. This is in contrast to an average increase of 780,000 head between the censuses of 1937 and 1947.

TABLE 1.—CATTLE NUMBERS, ARGENTINA AND PAMPA PROVINCES, 1937–56*
(*Million head*)

Date	Argentina		Pampa Provinces[a]		
	Total	Increase	Total	Per cent of total	Increase
Census, 6/30/37	33.2	1.0[b]	24.1	72.6	2.3
Census, 5/10/47	41.0	7.8	31.6	76.8	7.6
Survey, 6/30/54	43.6	2.5	33.7	77.3	2.1
Survey, 6/30/56	46.9	3.3	36.9	76.7	3.2

* Source: Junta Nacional de Carnes, *Reseña Año 1957*, "Evolución de la Existencia de Ganado Vacuno en la República Argentina, Según los Censos y Principales Investigaciones Ganaderas Realizados a Partir del Año 1930."

[a] Buenos Aires, Córdoba, Entre Ríos, La Pampa, and Santa Fé.

[b] Outside of the Pampa Region, most provinces had experienced a decrease in livestock numbers since 1930, the date of the previous census.

In the Pampa Provinces, in which by far the greater number of cattle in the country is concentrated, the annual increase between 1937 and 1947 was around 750,000 head. From May 1947 through June 1954 it was 300,000 head.

The annual averages are merely suggestive. Conceivably all of the gain may have been concentrated in the last few years before the 1954 survey; there may even have been a decline between 1947 and 1951, caused by drought losses, on the magnitude of which there is no agreement, and the enormous slaughter and export totals in 1947–50.

The following totals (in million head) are higher than those given above (p. 164) because they include estimated farm slaughter:

1946.....	8.2	1951.....	8.1
1947.....	9.7	1952.....	8.8
1948.....	9.6	1953.....	8.0
1949.....	9.5	1954.....	8.2
1950.....	10.0		

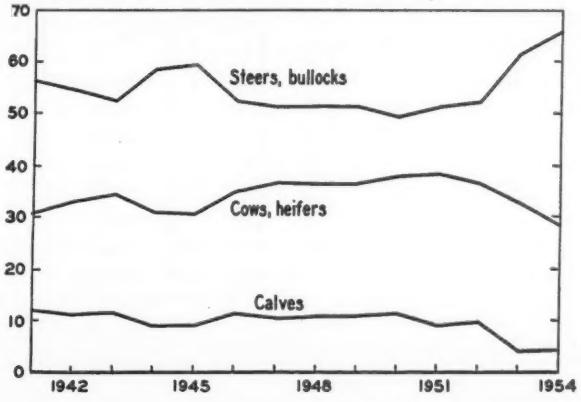
In Argentina the prudent level of herd reduction in any year is considered to be around 23 per cent of the total. In 1947 the total was 23.7 per cent of the cattle population reported in the census taken in May 1947, the seasonal equivalent of November in the Northern Hemisphere, by which time the autumn sales (those of March and April usually are the heaviest of the year) had already taken place. The somewhat lower slaughter during the next two years might well have been within the margin of safety if drought losses were not too heavy.

[26] The present discussion pertains chiefly to the period 1946–54. A more detailed treatment retrospective from 1956 back to 1937, together with statistical tables, charts, and maps, is given in Appendix Note B.

Overslaughter does not necsesarily mean that the commercial reduction of herds is too large in relation to the total livestock inventory. It has to be interpreted in terms of the composition of the cattle population and the composition of slaughter (Chart 2). Cows and heifers appear to have bulked too heavy in the

CHART 2.—Composition, Cattle Sales for Slaughter and Exportation, 1941–54*

(Per cent of total)



* Computed from Junta Nacional de Carnes, *Reseña Año 1957*, "Composición por Clasificación de la faena registrada . . . ," and *ibid.*, "Evolución de la Exportación de Vacunos en Pie . . . ," which add up to total cattle sales for slaughter in *ibid.*, "Evolución de la Comercialización de Hacienda Vacuna . . . con Destino a Faena y Exportación en Pie . . ."

The breakdown on which the chart is based is for commercial transactions only, since the composition of farm slaughter is not known.

In Argentine usage, steers (*novillos*) are castrated male cattle of approximately 2 to 3 years of age, while bullocks (*novillitos*) are yearling steers.

totals, at least through 1952, particularly since the proportion of cows reported in the 1947 census was low as compared with the breakdown for 1937 (see the accompanying table). Even so, with 5.4 million heifers at mid-1947 and sales for slaughter for the whole year amounting to 1 million head, there should have been at least 8 million cows in 1948, even including farm slaughter. The large calf crop in 1947, approximately half of which were female, and the relatively low commercial slaughter rate for calves thereafter could have supplied replacements to make up for the abnormal 1947–52 slaughter record for cows if drought losses of calves and breeding stock were not too high. But maintenance of numbers was not enough. They had to be increased to keep pace with the growth of the human population, the wider spread of purchasing power, the meat subsidy in Buenos Aires, and the foreign demand.

Even if there had been no decrease in total cattle numbers, there must certainly have been a reduction in steers. This assertion is made on the assumption that in the period under discussion there was little carry-over in the number of steers from year to year for extra fattening, because of lively demand. Yet steer sales were comparatively little higher than the 1937–46 average, for the obvious reason that replacement stocks were lowered by the almost tripled depletion of bullocks.

TABLE 2.—COMPOSITION OF CATTLE HERDS, AND CATTLE SALES FOR SLAUGHTER AND EXPORTATION, 1937–54*

(*Million head*)

	Cows[a]	Heifers	Steers	Bullocks	Calves[b]	Bulls oxen, etc.[c]	Total
Census total, 6/30/37 ...	14.4	4.1	2.3	3.2	7.4	1.5	33.2[d]
(per cent of total)	43.6	12.6	6.9	9.7	22.6	4.6	100.0
Sales, 1937–45[e] (average)	1.7	.7	3.4	.4	.8	.1	7.1
Census totals, 5/10/47 ...	16.7	5.4	3.3	3.8	10.0	1.8	41.0
(per cent of total)	40.8	13.0	8.1	9.3	24.4	4.4	100.0
Sales, annual: 1947	2.4	1.0	3.7	1.0	.9	.1	9.1
1948	2.2	1.1	3.5	1.1	1.0	.1	9.0
1949	2.1	1.2	3.5	1.2	1.0	.1	9.1
1950	2.3	1.3	3.5	1.2	1.1	.1	9.5
1951	2.2	1.0	3.4	1.0	.8	.1	8.5
1952	2.0	1.1	3.2	1.2	.8	.1	8.4
1953	1.7	.7	3.6	.9	.3	.1	7.3
1954	1.5	.6	4.2	.8	.3	.1	7.5
Survey totals, 6/30/54 ...	17.9	5.8	4.0	4.6	9.4	1.9	43.6
(per cent of total)	41.0	13.4	9.2	10.6	21.6	4.2	100.0

* Source: Junta Nacional de Carnes, *Reseña Año 1957*, "Composición de las Existencias de Ganado Vacuno . . . , según los Censos y Principales Investigaciones . . ." ; *ibid.*, Tables, "Evolución de Comercialización de Hacienda Vacuna . . . con Destino a Faena y Exportación en Pie, . . . Cifras asolutas." Columns may not add up to totals because of rounding.

[a] Includes dairy cattle.

[b] 1937 census—male calves represent 10.9 per cent of total, female 11.3 per cent; 1952 census, 12.2 per cent for each sex; 1954 survey, 10.7 per cent male, 10.9 per cent female.

[c] Annual sales in this category under 100,000 head prior to 1941; over 100,000 but less than 115,000, 1942–46 (except 1945: 97,000); 120,000–144,000, 1947–54.

[d] Total includes 9.6 thousand head in the Federal Capital, without discrimination as to sex and age.

[e] Except for steers, these averages were all raised by a marked advance in 1946.

The foregoing provides one of the explanations of the shortage of cattle sales to the Buenos Aires-centered outlets that began in 1951 and were critical through 1953. But what about the 500,000-head increase in 1950 sales for slaughter? Was it entirely the consequence of big demand, or did some of it represent premature disposition to forestall further drought losses? Or did it mean, as has been said, that producers were closing out because it was not financially rewarding to do business under Perón? The evidence does not support this last claim. Three million hectares were added to the livestock area of the Pampa Provinces between 1947 and 1950 (*41*, p. 90),[27] yet the National Meat Board argues that official prices for the cereals and linseed were more favorable than those for steers during the period.[28] If this were the case, one must therefore look for other explanations of the shift of land from crops to pasture during these years. The drought, not prices, certainly had something to do with it, and the land might have reverted to former crops if the price relationship had not been more favorable to cattle growing thereafter (*42*). Prices notwithstanding, cattle production actually may

[27] The increase was from 33.4 million hectares, the average for 1945–49, but was 3.7 million above 1949.

[28] According to a parity-price index which measures steer prices in terms of the quantity of cereals and linseed that could be purchased by 100 kilograms of steer, live weight, paid for by central packers at the basic official rates.

have been more profitable prior to 1950 because increased costs (taxes, farm equipment, wages, shipping) fell more heavily on the crop farmer, and for an added reason having nothing to do with prices or costs, but with other income.

As was explained earlier, the typical Argentine farmer is a renter, and the livestock producer a land owner. Rents had been frozen by law since 1943. With inflation eroding rental income, many producers canceled leases and turned the acreage into pasture. Whatever the explanation, as early as 1948 it was reported that high prices were being paid for breeding stock because cattle production was regarded as the most promising form of agricultural enterprise (*43*, p. 7).

From 1948 through 1954 the most financially rewarding branch of cattle production was the growing of breeding stock (*42*, p. 52). Livestock production had become speculatively attractive, thereby contributing to the meat shortages because many animals usually sold for slaughter were retained or sold for breeding. The active demand and the high prices it inspired had caused established cattlemen to change their production practices; breeders and fatteners abandoned specialization and began to handle herds through the stud-to-market cycle. Small scale cattle ranches multiplied as landowners took over farms previously leased to grain growers and operated them on their own or sold them to nonfarmers attracted to the livestock industry because of the profits it seemed to assure.

Drought losses and herd expansion explain the drop in total cattle marketings following 1950, but they do not tell the whole story of what happened to Liniers and direct sales under the official price system. To return to 1951, when the decline amounted to 930,000 head, with steers making up to 68,000 of that figure, total cattle deliveries in the Liniers Market of Buenos Aires and direct sales to meat packers and processors were almost 1.4 million head lower than in 1950, of which steers accounted for 207,000. That is, the very market outlets that the government was trying to use to stabilize prices throughout the country, those that in combination had been the focal points of the cattle trade, experienced a diminution in sales that was more drastic than the decline for the country as a whole. Furthermore, the municipal markets of the interior, where the government had succeeded in establishing controls, also suffered. On the other hand, auction fair and unregistered sales were nearly 400,000 head higher than in 1950. Unregistered sales outlets received 214,000 more steers than in 1950, although purchases of all other cattle by them rose by only 100,000 head. Cattle sales in auction fairs were close to 300,000 head higher; steers represented 15,000 of the increase.

What had happened was typical of the market response to every government attempt until 1953 to stabilize prices or impose marketing controls: each was followed by a pronounced falling off in sales in the more easily regulated markets. The steps in the process already discussed are recapitulated below, with some additions.

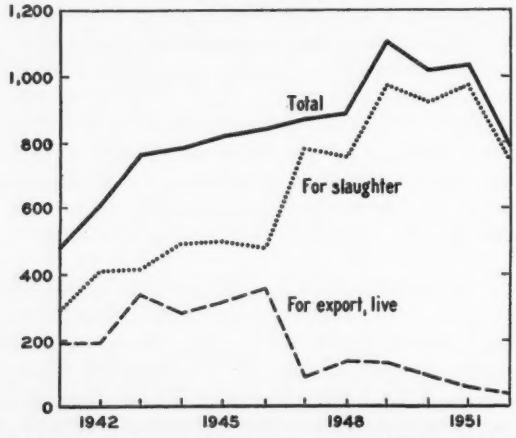
EVASION OF MARKETING CONTROLS

The first reaction was the diversion of steers from outlets where the official prices were fixed, that is, away from the direct method of sale to central packers and authorized regional processors. Through mid-1951, most of the diversion

was to the Liniers Market, because the official prices applied there and at Rosario as minima, not at fixed levels as in direct sales. In 1948, cattle exports, which had been much above normal since 1944, began to cut into the availability of cattle for export slaughter for the United Kingdom and other countries whose currency was needed to pay for imports. The government thereupon made exportation of cattle on the hoof subject to prior permit (*44*, p. 8). Steer exports dropped in 1949 by 270,000 head, but the decline did not produce the relief anticipated; it merely increased unregistered direct sales in the interior (see Chart 3). In July

CHART 3.—Unregistered Steer Sales*

(Thousand head)



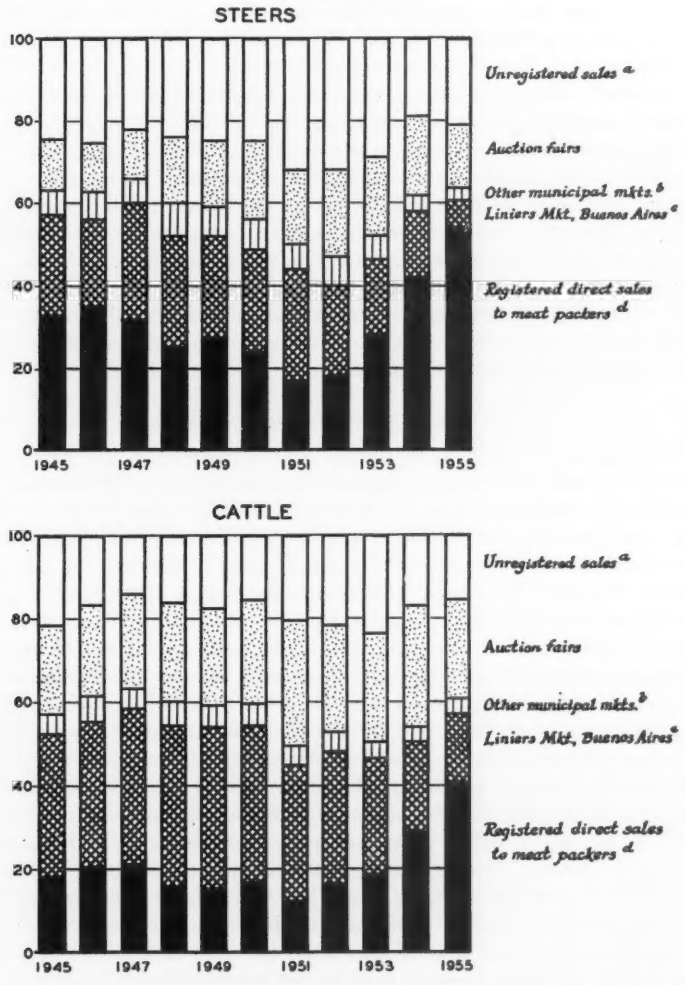
* Based on data from Junta Nacional de Carnes, *Reseña Año 1957*, "Evolución de la comercialización de hacienda vacuna de la República Argentina, con destino a faena y exportación en pie, durante los años 1934 a 1957, por Lugar de Operación. II.a) Novillos. Cifras asolutas," and *ibid.*, "Evolución de la exportación de vacunos en pie, por clasificación, durante los años 1934 a 1957."

and September 1951, after the government attempted to impose price ceilings in the Liniers Market, directly on export type steers and indirectly on all cattle, with both sets to serve as basing prices for sales all over the country, there occurred the resistance already described. The effects were more severely felt for steers than other cattle, and direct sales subject to official prices more than deliveries to Liniers (Chart 4). And direct steer shipments to central packers which needed steers of the best grades to fill export orders for carcass beef, in addition to canner types, fell off more than those to regional processors which exported canned meats and beef extract. This is not shown in Chart 4, which combines sales to both groups, but the following tabulation makes it clear (in per cent of total steer sales):

Year	Central packers	Regional processors
1946	28.3	6.6
1947	24.9	7.0
1948	20.2	5.1
1949	22.1	5.1
1950	18.6	5.9
1951	11.9	4.9
1952	11.3	6.2

CHART 4.—Market Shares of Steer and Cattle Sales for Slaughter and Exportation, 1945–55*

(Per cent of total)



* Source: for steers, Junta Nacional de Carnes, *Reseña Año 1957*, Table: "Evolución de la Comercialización de Hacienda Vacuna . . . con Destino a Faena y Exportación en Pie, . . . por Lugar de Operación. II.b) Novillos. Cifras relativas"; for cattle, *ibid.*, "I.b) Total de la Especia. Cifras relativas."

[a] Includes exports and estimates of unregistered purchases by interior abattoirs directly from producers.

[b] Rosario, Córdoba, Tucumán. Purchases by central packers in the Rosario markets were subject to official prices as minima until March 1953; as basic, 1953–55.

[c] Purchases by central packers in this market were subject to official prices as minima until March 1953; as basic, 1953–55.

[d] Includes registered direct purchases by central packing houses and regional producers, the only sales categories to which the official prices applied entirely as fixed prices.

The administration acted in numbers of ways to cope with the problem. Some of the September 1951 market restrictions that attempted to favor Buenos Aires at the expense of the interior were modified. Others were allowed to go into abeyance without the formality of official notice. Price ceilings for cattle sold in the Liniers Market were lifted temporarily on several occasions, then abandoned until March 1953. Packers were permitted to resume purchases in the Liniers and Rosario markets. On several occasions punitive measures were ordered against black-market operators (*45*, pp. 10–11; *46*, p. 508).

Perón personally announced an austerity program early in 1952 to apply to the whole country, which included the much publicized "meatless days." The purpose was to curb inflation and, for that year, was unexpectedly successful. The government was in a bad way financially; the economic policies and extravagances of Perón's first administration (he was re-elected early in 1952) had depleted the treasury. Foreign exchange was needed badly, but surpluses of the export staples did not materialize in the quantity or kind most hoped for; 1952 was the year Argentina had to import wheat, and even with the meatless days it was difficult to find meat for exportation.

CHANGE IN OFFICIAL PRICE POLICY

With supplies of cattle in the Buenos Aires area so tight, the government gave up its attempts to tie steer prices to meat prices in the British contracts; the July 1951 schedule was the last that had any direct connection with them. In the next two and a half years the administration raised the official rate six times (see Appendix Note A). It was seriously concerned with trying to curb inflation. Also, the Ministry of Agriculture did not think there was a shortage of cattle, and after the extraordinary census of November 1952 reported 45 million head (*37*, pp. 10, 18), or 4 million head above the 1947 census returns, the government was convinced that there were ample supplies which when ready for market would relieve the pressure on prices generatd by short supplies. Therefore the price advances, though individually not unliberal by earlier standards, were not enough to restore the old orientation of cattle sales toward the Liniers Market and central packers. Direct sales of all cattle had improved in 1952, but were partially offset by smaller deliveries to the Liniers Market; nevertheless, despite higher official prices and special bonuses for deliveries between May 15 and October 30, steer arrivals at the central packers and Liniers were even lower in 1952 than in 1951. There had been neither time nor funds to create the marketing structure throughout the interior which the administration had hoped would permit it to allocate cattle to the markets where they were most needed. Its hopes of doing so otherwise were frustrated by some of the officials entrusted with putting the new regulations into force.

Early in 1953 Buenos Aires was once more beset by a meat shortage, this time complicated by the scarcity of other basic foods; and the situation became explosive in March and April. At that time it developed that the head of the National Meat Institute and other highly placed Perón appointees, including his brother-in-law, were implicated in large-scale speculation in meat. They were forced to resign. On several earlier occasions Perón had threatened black marketeers with fines and imprisonment, but there had been little follow-

through. This time there was a wholesale roundup of meat-price violators and black market wholesalers. The capacity of federal prisons was taxed.

The government did not depend upon reprisals to achieve its ends. In May 1953 it again offered special inducements in the form of bonuses for winter delivery of steers to central packers and the Liniers Market. Furthermore it required central packers to maintain reserves of beef in cold storage to prevent recurrence of meat shortage crises such as the metropolis had experienced in the autumn of 1951 and in March–April 1953. Yet it extended liberal credits to producers to buy breeding stock. It was almost as if the administration was afraid to trust the returns of the 1952 livestock census.

The effect of credits to producers was further to inhibit the recovery of cattle sales for slaughter by heightening the demand for breeding stock. Nonetheless, steer sales in 1953 reached 3.6 million head, the highest since 1947 and close to 450,000 head more than in 1952. Direct steer sales to central packers during 1953 were more than double those made during 1952, although unregistered direct sales still dominated the market. In 1954 steer sales to central packers once more headed the field for the first time since 1946, and were higher than in any year since 1941. Total sales were still not high enough to take care of the demand. On February 8, 1954 a new official price schedule was announced that amounted to a small increase for lighter steers (*47*). It was the last revision that stemmed directly from the government's attempts to restore the official steer prices as the determining influence on cattle prices through the country.

The cattle cycle was definitely on the upswing, although it could not have been realized at the time because the traumatic effect of the recurrent crises of cattle shortages did not encourage optimism. Full recognition of the recovery did not come until December 1954, when for the first time since August 1950 the aggregate monthly arrivals of all cattle at the Liniers Market and in direct sales to the packers topped 400,000 head, with steers making up over 60 per cent of the total (*48*).

The improvement continued and, as was to be expected, prices in Liniers auctions reacted inversely to the larger number of entries; even steer prices fell slightly. The following tabulation gives six-month average prices for all cattle and for steers (in pesos per kilo, live weight) for January–June 1955, with comparisons (*49*):

Period	All cattle	Steers
1953 annual	1.937	1.971
1954 annual	1.925	2.046
First 6 months, 1954, average	1.908	2.000
First 6 months, 1955, average	1.834	1.964

THE CRISIS OF ABUNDANCE

There was an abundance of cattle such as the country had not experienced in a long time, and gloom settled upon the producers. The government took advantage of the situation to announce on April 28, 1955 its intention of broadening the official grading and price system to cover all cattle; grades and prices were published in mid-May (*50*, p. 22; *51*, p. 19). For cattle other than steers, for which seasonal bonuses were in force, the official prices were "not [to] be

exceeded in any circumstances, bonuses, direct or indirect, being strictly forbidden."

The new system was planned to be countrywide in application, but difficulties in working out arrangements caused postponement of introduction on the broad scale initially intended. In consequence the official prices applied only to direct sales; even purchases in the Liniers and Rosario markets were excluded.

All of this occurred at a time when direct sales would have been high without special inducements. Even during the cattle shortages, when the disequilibrium between official and market prices caused many steer producers to prefer auction markets for their animals, direct shipments of other types of cattle were much better sustained. When imposition of ceiling prices in 1953 revived direct steer shipments, the proportion of other cattle in direct registered-sale totals remained higher than before IAPI's price policy disrupted the established pattern of trade. With the application of official prices to all cattle but only on direct purchases by companies designated by law, the packers were overwhelmed with offers. Entries in the Liniers Market fell to almost a third of what they had been during the earlier months of the year. Apparently the only reason that interior markets were not similarly affected was that there were not enough authorized packing houses to handle more animals or cattle cars on the railroads to transport them.

The alarming thing about the Liniers Market situation was the large number of cattle remaining unsold at the end of each day (*50*, pp. 8, 10; *52*, p. 7). For the first time since Perón became president in 1946 there was legitimate cause for complaint that the working of the official system was creating hardships for a large class of cattle producers, not because the official prices were too low but because so many producers were excluded from the possibility of benefiting from them. At last, on July 18, 1955, it was announced that the authorities had arrived at a method for putting the new system into operation on September 1; on that date the fixed prices would apply in all cattle markets throughout the country (*53*, p. 29). Likewise on September 1 the official price schedules were to be increased somewhat, not only for steers alone but those for other cattle which had been in force only since the previous May.

If one should wonder why Perón's administration raised official prices, however slightly, when for the first time since he assumed the presidency in 1946 there were more cattle than the market could absorb, there are several possible explanations. Of course, it may be argued that the intention was to offset the march of inflation, although inflation had been following its customary course at the customary acceleration of pace since before February 2, 1954[20] (the date when the last increase for steers had been decreed), without the administration's taking cognizance of it in the official price of steers or, for that matter, of wheat to the farmer. And, as was said in the preceding paragraph, the official prices for other cattle were also raised although they had been in effect for little more than three months. A more credible explanation is that the government was anxious lest discouragement over the state of the market might lead to an injudicious depletion of cattle numbers.

[20] The cost-of-living index for Buenos Aires had risen over 100 points since then.

Export prospects were more promising than at any time in the preceding ten years. Even with cattle abundant, the final British meat contract had barely been filled. The government, still exercising the export monopoly over sales to the United Kingdom, had been deprived of the benefits of the good prices that had prevailed since British rationing had been lifted in July 1954, and was not willing to see its future participation in the trade prejudiced by a recurrence of shortages. But there is another inference suggested by the timing and the detailed plan for implementing the new system: that the government had never relinquished its determination to regulate cattle prices, but had learned from experience that the best time to initiate price controls is when the item affected is in abundant supply, and that the best way to make the control aspect more acceptable is to keep the prices higher than prevailing market bids until such time as the new system is firmly established.

In any event, the prices that went into effect on September 1, 1955 amounted to a relief measure, a subsidy to the cattle producers who at the beginning of Perón's first term in 1946 had been one of the sectors of the economy singled out to subsidize the industrialization of the country and the social-welfare goals of the administration.

While official steer prices since 1953 had been high enough to restore direct sales to registered meat packers and processors, they cannot properly be labeled a subsidy to an ailing industry. Aside from the period when Miranda tried to stabilize prices by refusing to raise the official rates (October 1, 1946–April 1, 1949), steer prices were raised more and more often under Perón than those of the cereals and linseed. There is no intention of saying that the industry was as prosperous as in the years before Perón's "reforms" set off the rocket of inflation, but in comparison with other major branches of agriculture, none, with the possible exception of the sugar growers of Tucumán, did as well. For what it is worth (and it is worth little, in the opinion of the author), the average of official prices paid for steers in direct sales to central packers[80] may be deflated by the cost of living in Buenos Aires (wholesale prices, a preferable index, are not available for 1950–55), with the following results (in pesos per kilo, live weight; derived from official statistics in *54*):

1939.....	.288	1945.....	.321	1951.....	.288
1940.....	.304	1946.....	.306	1952.....	.282
1941.....	.298	1947.....	.315	1953.....	.355
1942.....	.359	1948.....	.286	1954.....	.353
1943.....	.364	1949.....	.259	1955.....	.337
1944.....	.371	1950.....	.254		

Even if these deflated prices had any meaning, it would only be for those steers sold directly to central packers, which comprised 24.9 per cent of all steers marketed in 1947 and descended to 11.3 per cent of the total in 1952. In four years, 1948, 1949, 1951, and 1952, steer prices in Liniers and the municipal markets of Rosario, Córdoba, and Tucumán, which accounted for 34.7 per cent of total steer sales in 1948 and 29.2 per cent in 1952, averaged higher than the official

[80] These prices are used because the averages are more representative of the better grades of steers and hence give a better idea of the prices received by the majority of producers than if the prices paid by regional packers were figured in the totals.

prices paid in registered direct sales. Auction fair prices were always lower, and the prices paid in unregistered direct sales are estimated by the National Meat Board to have been the same as those in auction fairs, curiously enough, since the share of this category in all steer sales rose from 24.0 per cent to 32.2 per cent in 1952. If producers were paid no more on such sales than they would have received in auction fairs, they were placing a higher premium on defiance than their response to the official price increases following 1953 suggests. Not to be forgotten, also, is that during this period many producers found it more profitable to sell their cattle young for expansion of breeding herds than for slaughter.

The official scales from 1953 on were the price the government was prepared to pay to bring the market back into balance. It could not afford recurrence of crises in the meat supplies of the metropolis and a continuing loss of export earnings. Without the advances that tipped the scales once more in favor of the Buenos Aires–centered outlets, it is questionable whether the 1953 measures to contain the gray market would have been effective so long as the expansion of cattle herds reduced supplies of slaughter grades. Nevertheless, the price, added to that of maintaining the meat subsidy, which had been extended to Rosario and Bahía Blanca, was to cost the government dearly.

Not so much so, however, as the extension of official prices to cover all meat animals. Perón did not have to cope with that problem, however. His government fell on September 19, shortly after the system became country-wide in application.

APPENDIX NOTE A

With the footnotes, Appendix Table 1 illustrates the complexity of the official price system. No attempt is made in the table to reproduce all of the price changes for each of the grades under the official carcass-grading system, which are designated, from the highest to lowest, by the letters J, U, N, T, A, for *Junta Nacional de Carnes,* the National Meat Board, with subdivisions within grades. The prices given pertain only to the top classification, the J grade, which is the best type of steer produced in the country. Changes in the official prices were not made by raising prices in each grade by the same percentage; for example, the official schedule for October 1, 1946, which raised the prices of J and U_1 grade steers by close to 23 per cent, advanced the prices of lesser grades from 27 to 36 per cent. Furthermore, in most years the best price in any grade carried a definite weight limitation (all prices in the official system were on a dressed weight basis), with lower prices paid for weights in excess of those being encouraged at the date the schedule was issued. However, weights within grade were changed with some frequency. In the 1946 schedule the top price was paid only for steers dressing out at 160 kilograms or more per side. Thereafter the best prices applied only to dressed sides up to and including the weight favored at the time, not so much by the government as by buyers in the uncontrolled market (uncontrolled in the sense that the government was unable to control it). Appendix Chart 1 illustrates how the weight differentials favored lighter steers after 1950. Appendix Table 2 gives average prices, live weight, paid by meat packers and processors on all direct steer purchases under the official system. The higher prices paid by the central packers come from the fact that their main activity is the preparation of

APPENDIX TABLE 1.—OFFICIAL PRICES, J GRADE STEERS, 1945–55*

(Pesos per kilogram, dressed weight)

Effective Dates	Sides, up to 160 kg.	Sides, up to 130 kg.
8/22/45– 9/30/46	0.68[a]	0.68[a]
10/ 1/46– 3/31/49	0.85[b]	——[c]
4/ 1/49– 6/ 6/50	1.16	1.16[d]
6/ 7/50– 8/20/50	1.41	1.41[d]
8/21/50– 6/30/51	1.44	1.48[e]
7/ 1/51– 1/27/52	2.11	2.19[f]
1/28/52– 5/14/52	2.55	2.65[g]
5/15/52–10/20/52	2.64	2.74[h]
10/21/52–12/31/52	2.74	2.74[i]
1/ 1/53– 3/25/53	3.20	3.20[j]
3/26/53– 2/ 7/54	3.62	3.62[k]
2/ 8/54– 8/31/55	3.47	3.75[l]
9/ 1/55–12/ 5/55	3.72	4.00[m]

* Source: Junta Nacional de Carnes. *Reseña Año 1957*, "Evolución de los precios fijados para practicar la liquidación de tropas de novillos . . ."

[a] No weight limits in force.

[b] Dressed sides, *160 kg.* and over.

[c] *130 kg.* sides, J and U_1 grades not eligible, this sale.

[d] Dressed sides up to *170 kg.*

[e] Top prices 1.4800 pesos/kg. for sides up to *130 kg.*; price per kg. of first 20 kgs. in excess of 130—1.4100 pesos; for second 20 kgs. of excess—0.955 pesos, etc. The unit price of a 160 kg. side figured out as follows:

130 kg. at 1.4800 pesos	= 192,4000 pesos
20 kg. at 1.4100 pesos	= 28,2000 pesos
10 kg. at 0.9550 pesos	= 9,5500 pesos
160 kg.	= 230,0150 pesos
1 kg.	= 1,4384 pesos

[f] Top price, 2.1900 pesos per kg. for sides up to *130 kg.*, price per kg. first 20 kgs. in excess of 130—1.8600 pesos; for second 20 kgs. of excess—1.5800 pesos. Price of 160 kg. side, figured as in [e], comes to 2.1106 pesos per kg.

[g] Top price, 2.6500 pesos per kg. for sides up to *130 kg.*; price per kg. first 20 kgs. in excess of 130 kg.—2.2500 pesos; for second 20 kgs. of excess—1.1900 pesos.

[h] Top price, 2.740 pesos per kg. for sides up to *130 kg.*; price per kg. first 20 kgs. in excess of 130—2.3300 pesos; for second 20 kg. of excess, price per kg.—1.9800 pesos. Seasonal bonuses were offered for shipments during May 15–October 30.

[i] Top price applied to sides up to *160 kg.*; this is an increase only for weights of 131–160 kg. per side.

[j] Top price applied to sides dressing out up to *160 kg.* On February 8, 1953 the schedule was revised to penalize sides in excess of *180 kg.*

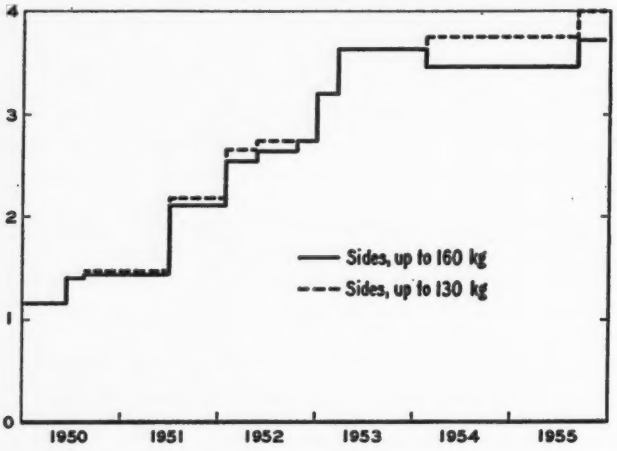
[k] Top price applied to sides dressing out up to *160 kg.*, until May 6, 1953, when penalties were applied to animals dressing out at more than *170 kg.* This schedule made the official prices maxima rather than minima, as formerly.

[l] Top price applied to sides dressing out up to *140 kg.* per side; price per kg. of first 10 kg. in excess of *140 kg.*—2.50 pesos; of second 10 kg. excess—1.00 peso. During September 6–30, 1954, 10 per cent was added to the official prices of all steers to be slaughtered for consumption in the Federal Capital and Greater Buenos Aires. Seasonal bonuses were paid for shipments between May 15–August 31, 1955.

[m] Top price applied to sides dressing out up to *140 kg.* per side; price per kg. of first 10 kg. in excess—2.50 pesos; for second 10 kg.—1.00 peso.

carcass beef for market; hence they use, on the whole, the better grades of steers. Regional processors of beef extracts and canned meat of various types do not require quality animals, and their purchases are usually in the canner grade at the bottom of the official scales.

APPENDIX CHART 1.—Price Differentials, J-Grade Steers, 1950–55*



* Based on Table 1.

APPENDIX TABLE 2.—ARGENTINA, OFFICIAL STEER PRICES PAID ON DIRECT SALES, 1945–55*

(Annual averages, all classes, pesos per 100 kgs. live weight)

Year	Central packers	Regional processors
1945	38.3	29.8
1946	43.0	31.2
1947	50.2	37.6
1948	51.7	41.0
1949	61.3	52.7
1950	75.4	60.3
1951	116.7	78.8
1952	158.9	128.6
1953	207.7	168.1
1954	214.4	174.1
1955	229.7	182.4

* Source: Junta Nacional de Carnes, *Reseña Año 1957*, "Evolución de las ventas de vacunos . . ."

APPENDIX NOTE B

Unfortunately it is not possible to pinpoint graphically the results of herd expansion during the years Perón was President of Argentina, 1946–55, because detailed breakdowns of cattle numbers are available only for the years 1937 and 1956 and then only for the central cattle region, which is smaller than the Pampa Provinces, for which census and survey data for intermediate years have already been used. Nevertheless, the locations in the central region in which the largest gains were made during the 20-year period are not irrelevant (see Appendix Tables 3 and 4; Maps 1 and 2).

APPENDIX TABLE 3.—INCREASE IN CATTLE NUMBERS, PAMPA PROVINCES, 1937–56*

(*Million head*)

Division	1937 to 1947 [a]	1947 to 1954 [b]	1954 to 1956 [c]	1937 to 1956 [d]
Argentina	7.8	2.5	3.3	13.7
Pampa Provinces	7.6	2.1	3.2	12.8
Province of Buenos Aires	3.6	.4	1.5	5.5
Province of Santa Fé	1.8	.6	.4	2.8
Province of Córdoba	1.1	.5	.9	2.5
Province of Entre Ríos	.8	.6	[e]	1.4
Province of La Pampa	.2	.1	.3	.6

* Junta Nacional de Carnes, *Reseña Año 1957*, "Evolución de la Existencia de Ganado Vacuno en la República Argentina, Según los Censos y Principales Investigaciones Ganaderas Realizados a Partir del Año 1930." Columns do not necessarily add up to totals because of rounding. Provincial totals agree with figures for censuses and investigation years for the Pampa region given in Economic Commission for Latin America, *Analisis y Proyecciones del Desarrollo Económico, V: El Desarrollo Económico de la Argentina, Segunda Parte: Los Sectores de Producción* (UN, ECOSOC, General E/CN.12/429/Add. 1, Santiago, Chile, June 30, 1958), p. 90.

[a] Census, June 30, 1937.
[b] Census, May 10, 1947.
[c] Survey, June 30, 1954.
[d] Survey, June 30, 1956.
[e] 15,000.

Even though three-fourths of the gains in cattle numbers were made between June 1937 and May 1947, they were largely concentrated in a few years prior to the latter census. From 1937 through 1941 slaughter was consistently larger than in the preceding 10 years, culminating in 1941 with the second highest record to that date, which was recognized as overslaughter. Cattle prices were so good, however, that 1942 sales were higher than the cattle population was equal to, with a consequent diminution of sales later. Until 1945 the change from the prewar cattle area of the Pampa Provinces (*41*, pp. 51–90) was relatively small (in million hectares):

1930–36 average	30.0
1939–44 average	31.0
1945 annual	33.0
1946 annual	33.9

During 1945 and 1946 the wheat, corn, and flax area of the Pampa Provinces all dropped, but the decline for corn was almost double that of the other two.[31] Therefore it might have been expected that the largest gains would have been concentrated in that part of the humid pampa (*55*) which is ecologically most adaptable to those crops, especially corn—those parts of Zones I, II, III, IV, and VI of Buenos Aires Province and Santa Fé where the dot maps show the heaviest increase for the 20-year period; that is, within reasonable proximity of Buenos Aires and Rosario. Quite possibly the largest part of the small increase in cattle numbers between 1947 and 1954 occurred there. Some of the consternation at the time of the 1951 shortages in Buenos Aires was that observers on field trips

[31] Not all of the change in the crop area was accompanied by a commensurate rise in the cattle area.

APPENDIX TABLE 4.—CATTLE NUMBERS, CENTRAL REGION, 1937–56, WITH COMPARISONS*

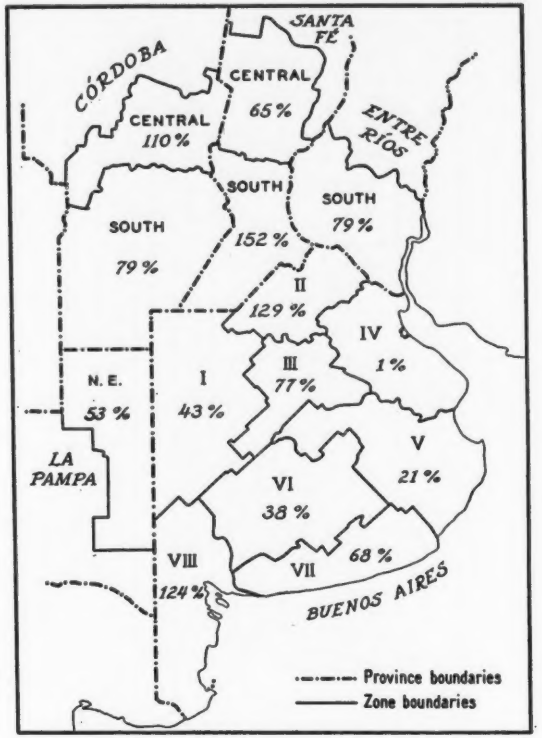
(*Million head*)

Division and description	Census of June 30, 1937	Survey of June 30, 1956
Argentina	33.2	46.9
Pampa Provinces	24.1	36.9
Central Region[a]	20.7	32.0
Province of Buenos Aires	*12.8*	*18.4*
Zone I (winter fattening)	3.0	4.3
Zone II (mixed agriculture, north)	.7	1.6
Zone III (mixed agriculture, central)	1.2	2.1
Zone IV (mixed dairying)	2.1	2.2
Zone V (breeding, east)	2.3	2.7
Zone VI (mixed breeding, central)	2.3	3.2
Zone VII (mixed breeding, southeast)	.9	1.5
Zone VIII (mixed breeding, southwest)	.4	.9
Province of Santa Fé Central Region	*2.7*	*5.2*
Central Zone	1.7	2.8
Southern Zone	1.0	2.4
Province of Córdoba Central Region	*3.0*	*5.6*
Central Zone	.6	1.3
Southern Zone	2.4	4.3
Province of Entre Ríos Central Region, Southern Zone	*1.3*	*2.3*
Province of La Pampa Central Region, Northeast Zone	.9	*1.4*

* Junta Nacional de Carnes, *Reseña Año 1957*. Figures do not necessarily add up to totals because of rounding.

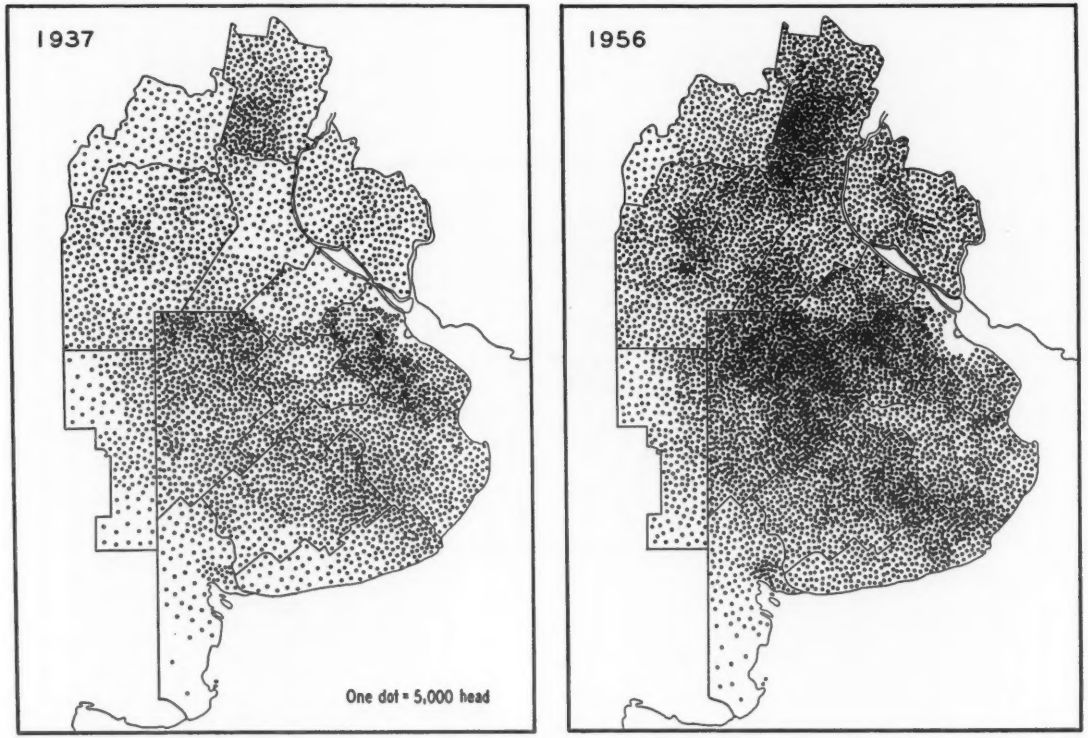
[a] All the Province of Buenos Aires; zones of other four provinces as noted.

MAP 1.—Cattle Increase 1937–56, Central Region, by Zones*



* Based on Table 4.

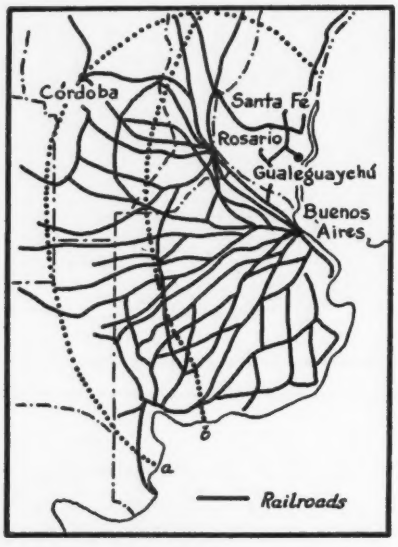
MAP 2.—Cattle Numbers, Central Region, Census of June 30, 1937 and Survey of June 30, 1956*



* Based on Junta Nacional de Carnes, *Reseña Año 1957*, "Existencia Ganadera."

to cattle ranches in the area saw little evidence of drought damage and reported ample supplies of mature cattle (*37*, p. 9). If losses of cattle in any part of the central region were offset by gains in the part of the country with the greatest population density (within the area bounded by the inner dotted line on Map 3),

MAP 3.—Main Railroad Lines, Central Region



[a] Limit of Pampa Region.
[b] Limit of humid pampa.

the Federal Capital should have been one of the last places in the country to suffer as a result of drought-reduced cattle herds. Incidentally, this was the section in which the government control mechanism was centered. All railroad lines led into it, and after 1948 these were government-owned. There are few good highways and, at that time, there were fewer trucks to use them than at present; railroads are the accepted means of transporting cattle. It is doubtful, however, whether the government could have enforced price and marketing controls even if the officials appointed to do so had not connived in defying them.

The big increases in cattle numbers between 1954 and 1956 apparently occurred throughout the livestock zone, and especially in the drier parts which had suffered most losses during the drought. During these few years there was little change in the cereal–linseed area, but a heavy drop in the numbers of sheep and draft animals in the Pampa Provinces (5.9 million head) had released pasturage not hitherto used for cattle.

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HOLBROOK WORKING

SPECULATION ON HEDGING MARKETS

Though statistical evidence, accumulated first by the Grain Futures Administration, predecessor of the present Commodity Exchange Authority, long ago afforded proof to the contrary, it is still rather generally believed that futures markets are primarily speculative markets. They appear so on superficial observation, as the earth appears, from such observation, to be flat. A conspicuous recent result of reliance on superficial appearance was that an administrator of the CEA and a majority of members of the United States Congress were persuaded, mistakenly, that the onion futures market had attracted an excessive amount of speculation, supposedly requiring the prohibition of futures transactions in that commodity. The result was enactment of Public Law 85–839 prohibiting futures trading in onions.[1]

In the present article I seek chiefly to put available official statistics of futures markets into such form as to make clear what they show regarding the relations of speculation and hedging on such markets. First, however, it is necessary to find a definition of *speculation* that can be used consistently and without confusion.

The commercial meaning of "speculation" was undoubtedly derived from earlier use of the verb *speculate* in the sense of *observe* (the meaning of its Latin root, *speculari*), hence *to try to see,* or *try to understand.* In that sense of the word, we speculate on the nature of the universe, on the reasons for a person's actions, or on the probable consequences of a given situation. The verb implies uncertainty, coupled with some reasonable basis for an opinion regarding the subject concerning which we speculate, or meditate. Presumably the present commercial use of the term originated from frequent references to speculation (in the sense of meditation) about future commercial events. In time "speculate" came to mean the *actions taken* on the basis of such meditation rather than the meditation itself.

Then someone, impressed by the hazards of commercial speculation, could

[1] That action, closing one economically useful market and implying an imminent danger of similar closing of other such markets, emphasizes a need for better and more widespread understanding of the economics of futures markets. In a previous article (*23*, p. 3), I reviewed evidence on the price effects of futures trading—evidence that directly contradicts what the congressional committees had been led to believe; and I promised there a subsequent discussion of reasons why the congressional committees interpreted as they did the evidence put before them. The reasons are not specific to the onion market, but general, influencing most people who are otherwise well informed, and producing misunderstanding and misjudgment of all futures markets. Only part of them can be considered here.

speak of a "speculative venture" and have people understand that by *speculative* he meant *risky*—a meaning far removed from the original meaning of *speculate*. "Steal" has taken on a similarly new meaning in the baseball expression, "steal a base."

Speculation, in the commercial sense, appears always to have been criticized by many people; the word seems always to have had a derogatory flavor. Such disapproval, arising in a society that has tended to honor the taking of risks in good causes, must be supposed to have rested on a prevalent belief that commercial speculation tends to be predatory rather than productive.

Economists and businessmen who have seen virtues in commercial speculation have often sought to define speculation as *economically necessary* risk-taking. Thus they have argued that a farmer speculates when he postpones sale of part of his crop for several months after harvest, in the hope of getting a higher price later. By the same argument, a manufacturer may be said to speculate when he contracts the purchase of supplies, well in advance of need for them, in the belief that he can buy more cheaply then than later. Such a definition of speculation amounts to defense by definition. As such, it has been ineffective, doing little or nothing to improve most people's opinions of speculation in general. The main result has been to introduce confusion concerning the meaning of the word. Economic discussion of speculation has thus reached conclusions that tend to be misleading in practical application, because it has considered one thing, and the conclusions are applied to something rather different that goes under the same name.

Scarcely anybody uses the word "speculation" consistently in the artificial sense of "economically necessary risk-taking," while nearly everybody uses it sometimes or always in another, commonly understood, sense. In ordinary usage, speculation in commodities means seeking profit from transactions undertaken especially for that purpose, and not in the normal course of conducting a business of producing, merchandising, or processing a commodity. This definition might be considered to include arbitrage, but in ordinary usage arbitrage is not counted as speculation. Many people are unaware of the existence of arbitrage, and so do not mean to include it as speculation, and people who recognize its existence ordinarily distinguish between speculation and arbitrage.

The distinction ordinarily drawn between speculation and investment in securities follows the same principle that is commonly followed in distinguishing between speculation and other dealings in commodities. Though investors often acquire and hold securities primarily in expectation of appreciation in "value," rather than for current income, this is not regarded as speculation so long as the operations are only those normal to the business of keeping funds invested prudently and profitably. It is more difficult in practice to draw a line between speculation and investment in securities than between speculation and other dealings in commodities, but the principle on which people ordinarily mean to draw the line is the same in both cases. It is that of distinguishing between obviously desirable or appropriate business activities, and activities that, if useful and desirable, do not always appear so on the surface.

By way of formal definition we may say that *speculation in commodities is*

the holding of a net long or net short position,[2] *for gain, and not as a normal incident to operating a producing, merchandising, or processing business.*

For our present purposes this definition of speculation, excluding from it all profit-seeking transactions normal to the conduct of production, merchandising, or processing, and excluding arbitrage, has three advantages. It conforms with the commonly understood meaning of *speculation*. It is a logical accompaniment of a good general definition of hedging (use of futures contracts as a *temporary substitute* for contracts intended to transfer ownership of a quantity of the commodity, in the normal course of business).[3] And it accurately describes the principle underlying the classification used in those statistics of commodity futures, published by the CEA, that we shall be using.[4]

There has sometimes been discussion of the question whether speculation is significantly distinguishable from gambling. In the United States this question has often come before the courts, because men who have lost money at speculation in commodity futures, thereby incurring debts to brokers, have sought to avoid payment by claiming them to be gambling debts.

Gambling does indeed resemble speculation, and likewise resembles many business undertakings, in that all involve taking risks in the hope of financial gain. Moreover, a man *can* undertake speculation, or a business venture, in a purely gambling spirit. Similarly, a man firing a rifle goes through the same motions whether he is aiming at a target on a rifle range, at a deer, or at a man across the street. And there apparently are some people who can shoot at a man with as little feeling as at a practice target. It is nevertheless profitable for society to distinguish among different uses of a rifle, and among different uses of risk-taking for monetary gain. Nor do we have any real difficulty in drawing these distinctions when we reject sophistry and apply common sense. We call a man an entrepreneur when he takes risks in a clearly useful type of business venture; a gambler when he takes risks of a nature that clearly serve no substantially useful economic purpose; and a speculator when he takes risks of another sort, that

[2] This phrase excludes arbitrage, and also any other holdings of matching long and short positions, such as may arise from mere failure to promptly cancel out directly offsetting contracts on the books. I intentionally avoid specifying that the net position should be calculated for a single commodity. For some purposes holding of long soybean contracts, for example, against short contracts in soybean oil and soybean meal, in appropriate proportions, should be considered arbitrage (and classed, more specifically, as either hedging or spreading, according to whether or not the holder is a soybean crusher, and the holdings of a size appropriate to the size of his crushing business). On the other hand, when considering the relative amounts of speculation and of hedging in, for example, Minneapolis wheat futures, the Minneapolis end of spreads between Chicago and Minneapolis should be counted as speculation in Minneapolis. In short, the line between arbitrage and speculation needs to be drawn according to the purpose of the analysis or discussion involved, hence a general definition of speculation must allow latitude for drawing that line differently in different circumstances.

Hedgers often engage in spreading operations, and sometimes their spreads may well be classed as a special form of hedging, as in an example cited in footnote 19 below. Usually, however, the holding of matching futures contracts in different markets or different delivery months seems to me best classed as spreading even when it is done by a firm that engages also in hedging.

[3] This definition, worded a bit differently, appeared first in *21*, p. 560.

[4] Until 1956 the Commodity Exchange Act, which the CEA seeks to follow in its statistical classification of futures contracts, was somewhat inconsistent with this principle, in that it failed to recognize anticipatory long hedging as true hedging. An amendment enacted July 24, 1956, recognized such hedging by processors and manufacturers as hedging, but implicitly leaves similar hedging by *dealers* to be classed as speculation. The small apparent inconsistency in definition that thus remains in the Act should perhaps be regarded, not as inconsistency with the principle, but as an expression of opinion that forward contracting of supplies by dealers is not "normal merchandising practice."

some people do not recognize as economically useful, though others regard them as highly useful.

The courts in the United States have tended to draw the line between speculation in futures and wagering according to the criterion of "intent to deliver." The adoption of this criterion by the courts seems to reflect an imperfect understanding of futures markets. The economic usefulness of futures contracts does not arise from their usability for merchandising, but mainly from their use for hedging. The courts can refuse to enforce gambling contracts in many states on the ground that such contracts are illegal, and in any state on the ground that such contracts are frivolous matters with which the courts refuse to concern themselves, as they would refuse to enforce the decisions of an umpire in a ball game. On the other hand, the courts seek to enforce futures contracts, and other contracts related to them, because futures markets are accepted as economically useful institutions. An economist would rather see the usefulness of futures markets affirmed in court on the basis of their true principal merits, rather than on the basis of a technical characteristic of the contracts that is necessary, but that, when emphasized, misrepresents the main function of such markets.

The choice of grounds on which courts in the United States have traditionally sustained futures contracts has had the unfortunate effect of hampering efforts of exchanges in the United States to control corners and squeezes. The exchanges have often felt compelled to countenance recognizably unreasonable demands for delivery, made for manipulative purposes, lest in the process of controlling manipulation they lose the court-recognized ground for distinguishing between economically useful contracts and economically unuseful wagers. In England, where the courts have relied on other criteria than intent to deliver, corners and squeezes have never presented a serious problem. No corner, and no squeeze of consequence, has ever been carried through on the Liverpool wheat futures market (*20*, pp. 137–38; *4*, p. 104).

RELATIONSHIP BETWEEN SPECULATION AND HEDGING

The first published statement of the conclusion that speculation on a futures market responds to hedging needs, appeared in an article by H. S. Irwin[5] (*5*) in 1935. Subsequently, further evidence was published by Hoffman (*3*, pp. 33–39) and by Schonberg (*7*, pp. 279–88). All of it showed that as commercially owned stocks of the commodity increased or decreased, tending to cause increase or decrease in the volume of short hedging contracts held against such stocks, speculative holdings of futures contracts tended to increase or decrease correspondingly.

Despite the published statements of this conclusion, and the steady appearance year by year of new statistics that always tended to confirm it and never

[5] Irwin, then an economist in the Grain Futures Administration, subsequently made an historical study of the origins of futures markets in butter and eggs, and undertook a reinterpretation of historical information on the origins of grain futures (*6*). Both indicated that futures markets had grown out of business needs, or wishes, of the sort that hedging meets. One cannot say accurately that it grew out of a desire for a means of hedging, in the modern sense, because only a primitive concept of the usefulness of hedging could emerge until after hedging facilities came into use. Even now it often takes several years following the establishment of a new futures market for handlers of the commodity to learn to use the market effectively for hedging. Irwin's intrepretation met such resistance at the time that the results of his study had to be published privately, but it can now be seen as certainly correct, at least in its main outlines.

contradicted it, the idea that speculation in futures depends on hedging gained little ground among either economists or members of the exchanges. In 1953 there occurred a striking demonstration of the continued adherence of exchange members to the old concept, and of the truth of Irwin's conclusion, published 18 years earlier, that speculation depends on hedging. In April and early May of 1953, flour mills with long hedges in Kansas City wheat futures (against unfilled flour orders) took substantial losses because soft wheat, unexpectedly drawn to Kansas City for delivery on futures contracts, depressed the price of the May future relative to prices of the hard wheats needed by mills to fill their flour orders. The millers promptly petitioned for a revision of the Kansas City futures contract to make it strictly a hard-wheat contract. It had always previously been so in effect, hedgers and speculators thought of it as such, and many members of the exchange had been surprised to learn that delivery of soft wheat was permitted by the contract.

The members of the exchange, however, seem to have been almost unanimous in the belief that the amount of futures business done on the exchange depended on attracting speculators, and the majority held also the common belief that speculators want a "broad" contract, allowing delivery of more than one class and grade of the commodity.[6] So the exchange refused the plea of the millers for a revision of the contract terms. But in July and August millers took even larger losses, per bushel, on their long hedges, for the same reason as earlier, and this time the losses occurred on a great volume of such hedges, held against recently placed flour orders for milling from the new crop. These new losses caused most millers who had been hedging in Kansas City wheat futures to transfer their hedging business either to Minneapolis, where the hedge was in a hard-wheat contract, or to Chicago, where the hedges, though no more reliable than at Kansas City, could be placed and removed more economically.[7] And speculators apparently deserted the market in about the same large proportion as did hedgers (22).

If the Kansas City exchange had persisted in rejecting the pleas of its principal hedgers, the wheat futures market there would very soon have joined the considerable list of such markets that have died because hedgers stopped using them. Mess pork and lard were among the commodities in which futures markets were established early at Chicago, and in the 1880's short rib sides were added to the list. Of these only lard remains, because development of mechanical refrigeration operated to so curtail the accumulation of stocks of cured pork products that hedging of them dwindled. New York City and St. Louis had important wheat futures markets at the beginning of the present century, but their business declined as changes in the wheat trade, and improved communications, reduced the special advantages of hedging in those markets rather than in the more economical Chicago market. Kansas City, Minneapolis, and Duluth held their hedging in competition with Chicago because their contracts were distinctive,

[6] There is no valid evidence, so far as I am aware, that speculators do have such a preference, but the opinion that they do has, for some obscure reason, gained wide acceptance on the exchanges.

[7] More economically because a hedger, wanting prompt execution of his orders, must expect ordinarily to buy at an "asked" price and sell at a "bid" price, and therefore, can obtain prompt execution at the lower cost in a "broad," active market, where bid and asked price are closer together than in a less active market.

applying to hard winter wheat,[8] hard spring wheat, and durum wheat, respectively; but in the 1930's drought and rust damage so curtailed production of durum wheat that the Duluth market was discontinued for lack of enough hedging business to support it.[9]

Further evidence of the sort cited above might be added in great quantity,[10] but without meeting the major obstacles to recognition of the significance of the evidence. These appear to me to be: (1) the existence of a great amount of evidence that *seems* to indicate that most speculation in futures occurs without any relation to hedging; (2) certain apparently reasonable grounds for doubt whether speculators have reliable means for appraising the hedging needs of a futures market, such as would be required for any close adjustment of the amount of speculation to the amount of hedging; and (3) certain shortcomings of the available statistics that have tended to render them unconvincing, except to people with a good deal of collateral information to aid in interpreting them, and considerable skill in reading the meaning of crude statistical evidence.

The prevalent opinion that much speculation in futures has no significant connection with hedging is a mistaken one that has arisen from a long-established habit of using an available crude indicator of the amount of speculation as though it were a direct and accurate measure of speculation. The only aspect of speculation that is readily observable is the *transaction* by which a speculator initiates or closes out a speculative venture. That is also the only aspect of speculation in futures concerning which any statistics were regularly published prior to July 1923 (*10*, p. 24).[11]

But these readily observable transactions are only incidental to speculation, as starting and stopping are incidental to driving an automobile across town. In speculation, to pursue the analogy, a new driver takes the wheel at each stop, and each new driver is usually another speculator. But one may observe these changes of "drivers" without learning anything about the question whether most of the trips across town are made on behalf of hedgers. To learn how much speculation is connected with hedging it is necessary to find out what proportion of total speculative open contracts is needed to carry the hedging open contracts. The principal observed facts that have *seemed* to show that speculation in futures does not depend on hedging have been misleading; we need to study the statistics of open contracts in order to learn the extent of connection between hedging and speculation.

[8] The Kansas City contract being distinctive, not by its terms but because, prior to 1953, the location of the market had effectively assured delivery of hard winter wheat on its futures contracts.

[9] The course of business on the several wheat futures markets from 1921 through 1935 can be followed conveniently in *10*, Tables 1 and 2, and for earlier years, in *16*, V, pp. 36–40. No statistics of futures transactions in the cured pork products exists, so far as I know, but emergence of irregularity in the recording of price quotations (*2*) shows when business had fallen very low.

[10] For example, the fluctuations from year to year in average volume of open contracts in wheat at Minneapolis reflect annual fluctuations in size of the spring-wheat crop of Minnesota and the Dakotas; fluctuations in open contracts at Duluth reflected variations in size of the durum crop; fluctuations at Kansas City reflect variations in size of the wheat crop of the Nebraska-Kansas-Oklahoma area. And examples such as the foregoing and those in the text might be cited for any commodity; it is only special familiarity with wheat production and marketing that has led me to pick examples from that commodity.

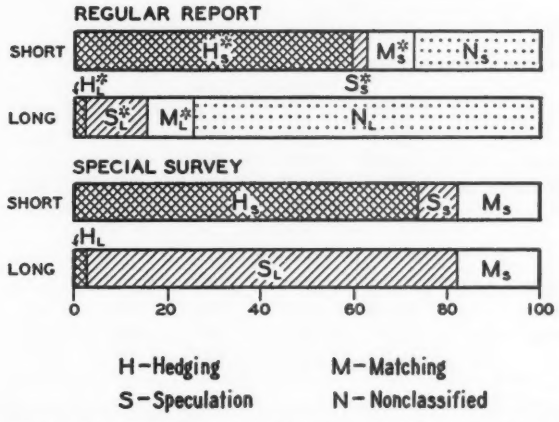
[11] The Grain Futures Administration then began publication of statistics of open contracts in grain futures, first in the form only of totals, later with a partial classification between speculative, hedging, and spreading contracts. The Federal Trade Commission subsequently published with discussion some special compilations of earlier data on open contracts (principally in *16*, VII, pp. 124–36).

Let us defer until later the question whether there exists any reasonably reliable mechanism by which speculators might be led to undertake the holding of futures contracts mainly in response to the offering of such contracts by hedgers. What then, do the statistics of open contracts show regarding the degree of correspondence between amounts of hedging and of speculation in futures?

A principal obstacle to drawing conclusions from the statistics of open contracts is illustrated by Chart 1, which compares the evidence from two sorts of

CHART 1.—Comparison of Classifications of Open Futures Contracts According to Regular Reports and a Special Survey, Eggs, July 31, 1946*

(Per cent of total)



* Based on data in Table 1; the date, which is the only one for which a complete classification of open contracts for eggs is available, was about a month after the establishment of an all-time record volume of open contracts in eggs. Asterisks (*) designate incomplete data from regular reports; subscripts distinguish short and long contracts.

available statistics. Data for two additional commodities are shown in Table 1. The lower bars in the chart compare amounts of speculative contracts (S) and of hedging contracts (H), long and short (indicated by subscripts), for a date for which a complete classification of the open contracts in eggs is available. (M represents matching contracts, presumably arising largely from inter-option spreading, but partly from temporary failure to cancel out offsetting long and short contracts on the books). Such a complete classification of contracts has been published for only a few commodities and a few isolated dates—often dates on which some exceptional conditions existed in the market, rendering the data unrepresentative. The data for eggs, given for the only date for which a complete classification of open contracts has been published, is one on which total open contracts in eggs were near their all-time record level, reached about a month earlier.

The two upper bars in the chart show, for the same date, the sort of statistics of open contracts that are published regularly, as of the middle and end of each month, for all regulated commodities. In these regularly published statistics there is a large "nonclassified" category (N), which absorbed 28 per cent of the

total short egg contracts on this date, and 74 per cent of the long contracts. Looking at the major elements in the short and long contracts, we find only 81 per cent of the short hedging contracts, and only 17 per cent of the long speculative contracts, explicitly classified as such in the regular reports (percentages calculated from data in Table 1).

TABLE 1.—COMPARISON OF REGULARLY REPORTED CLASSIFICATION OF OPEN CONTRACTS WITH COMPLETE CLASSIFICATION, EGGS, COTTON AND WOOL TOPS, AVAILABLE DATES*

(Carlots; thousand bales; thousand pounds)

Class of contracts	Eggs July 31, 1946		Cotton Sept. 28, 1956		Wool tops Dec. 31, 1957	
	Long	Short	Long	Short	Long	Short
A. Regular Reports						
Hedging	225	6,203	873	670	1,690	4,290
Speculative	1,416	284	102	3	1,785	0
Matching[a]	1,035	1,035	220	220	205	205
Nonclassified	7,746	2,900	668	970	3,665	2,850
Total	10,422	10,422	1,863	1,863	7,345	7,345
B. Special Surveys						
Hedging	261	7,710	1,001	1,140	2,290	5,300
Speculative	8,333[b]	884	268	130	3,385	375
Matching[c]	1,887	1,887	606	606	1,660	1,660
Total	10,481	10,481	1,875[d]	1,876	7,335	7,335

* Data from U.S. Dept. Agr., *Commodity Futures Statistics* (1947, 1957, and 1958) and from reports on CEA special surveys for commodities and dates indicated.

[a] Contracts explicitly classed as "spreading."

[b] Includes 234 carlots reported without classification by foreign futures commission merchants.

[c] Amounts long (short) that were offset by equal or greater amounts short (long) in individual accounts, not necessarily in different futures.

[d] Discrepancy between long and short totals reflects minor error in compilation of survey data.

The data in the chart are fairly representative of the degrees to which short hedging and long speculation get explicitly classified in the regularly published statistics for most commodities. But for eggs they are highly unrepresentative. We shall see subsequently that, on the average during the last five years, only about 27 per cent (instead of 81 per cent) of total short hedging in eggs has been explicitly classified as such in the regular reports. With egg stocks exceptionally large on July 31, 1946, contract holdings by individual hedgers tended to be large, and so an exceptionally large proportion of the hedgers held contracts for 25 carlots or more in a single future—the amount that brought them under the administrative requirement for reporting the classification of their contract holdings.

Despite the large proportions of open contracts that remain unclassified in the regularly published official statistics, it is possible to break down the nonclassified category with a reasonable degree of reliability. The common practice hitherto has been to regard the nonclassified contracts as mainly small-scale speculative contracts and therefore to add them to the reported (large-scale) speculative contracts. This procedure, applied to the data in Table 1, results in the percentage

distribution of contracts between hedging, speculation, and spreading and other matching contracts, that is shown in section (A) of Table 2. Section (B) of the table shows the results of applying a simple estimation technique, described in an appendix below, to allocate nonclassified contracts more appropriately. Section (C) shows, for comparison, the correct distribution of contracts among the three categories, as revealed by special surveys made as of the dates for which data are shown.

TABLE 2.—COMPARISON OF RESULTS OF TWO ESTIMATION METHODS FOR HANDLING NONCLASSIFIED FUTURES CONTRACTS*

(Per cent of all contracts)

Class of contracts	Eggs July 31, 1946		Cotton Sept. 28, 1956		Wool tops Dec. 31, 1957	
	Long	Short	Long	Short	Long	Short
A. Conventional Estimates from Regular Reports						
Hedging	2	60	47	36	23	58
Speculative	88	30	41	52	74	39
Matching	10	10	12	12	3	3
B. New Estimates from Regular Reports						
Hedging	3	73	61	50	30	75
Speculative	73	3	27	38	57	12
Matching	24	24	12	12	13	13
C. Special Surveys						
Hedging	2	74	54	61	31	72
Speculative	80	8	14	7	46	5
Matching	18	18	32	32	23	23

* Derived from Table 1; new estimates by procedure described in Technical Appendix.

The estimation procedure, it will be seen, has worked excellently in its apportionment of contracts to the hedging category. For eggs and wool tops the discrepancies exceed one percentage point only in the case of short hedging of wool tops, where the estimation procedure gave 75 per cent short hedging contracts as compared with a true value of 72 per cent. For cotton, the estimation procedure could not correct the false indication of the regular reports that there was nearly one-third more long hedging than short hedging (actually the amount of short hedging exceeded that of long hedging by over one-eighth), but the estimation procedure nevertheless gave nearly the correct total for the sum of the two sorts of hedging.

In its allocation of the remaining contracts between the categories of speculation and of spreading or other matching contracts, the estimation procedure resulted in understatement of the amounts of speculative contracts for eggs, and over-statement of the amounts of speculation in cotton and wool tops. But in all cases it produced estimates of the amounts of speculation that were closer to the truth, and usually much closer, than those obtained by merely treating all nonclassified contracts as speculative. The false indication of the regular reports that

there was more long hedging than short hedging of cotton necessarily carried over into the estimates of speculative contracts, in the form of a false indication of more short speculation than long speculation, but for the other two commodities, as will be seen, the estimates produced an approximately correct indication of the relation between the amounts of long and of short speculation.

The procedure tested above on data for three commodities, for individual dates on which the reliability of the method can be checked against completely classified statistics of open contracts, has been used to derive the data in Table 3,

TABLE 3.—ESTIMATED AVERAGE DOLLAR VALUES OF SHORT HEDGING AND OF LONG SPECULATIVE OPEN CONTRACTS, RATIOS, AND SPECULATIVE INDEX, ELEVEN COMMODITIES, MOSTLY 1954/55–1958/59*

(Million dollars; ratios)

Commodity	Short hedging contracts: Estimated total[a] H_S'	Short hedging contracts: "Reported" (large scale) H_S^*	Short hedging contracts: Reporting ratio[b] H_S'/H_S^*	Hedging ratio[c] r_h'	Estimated total long speculative contracts[a] S_L'	Speculative ratio[a] $r_{/s}'$	Speculative index[d] T'
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cotton	179.8	109.0	.61	.74	130.7	.73	1.27
Wheat	125.1	88.1	.70	.58	97.1	.78	1.22
Soybeans	102.6	57.9	.56	.52	92.7	.90	1.28
Corn	53.3	40.2	.75	.36	45.3	.85	1.16
Soybean oil	26.0	23.6	.90	.46	19.5	.75	1.14
Eggs	13.8	3.8	.27	.09	16.3	1.18	1.25
Wool tops	12.1	9.8	.81	.25	10.1	.84	1.07
Soybean meal	14.0	12.4	.89	.61	9.0	.65	1.16
Potatoes	3.3	2.2	.67	.30	3.5	1.05	1.27
Onions[e]	2.0	1.6	.79	.03	2.2	1.10	1.12
Bran[f]	.6	.6	.88	.66	.3	.53	1.12

* Five-year averages, 1954/55–1958/59, except as otherwise noted; computed from data in *Commodity Futures Statistics*, USDA Stat. Bull. No. 256, pp. 57–60, for quantities, and pp. 11–13, 24 (supplemented, for bran, by similar data from earlier issues) for average prices; cols. (2), (4), calculated directly from data in source. All calculations carried to more places than shown here.

[a] See Technical Appendix below: "speculative ratio" is amount of long speculation divided by amount of short hedging, col. (5) ÷ col. (1).

[b] Col. (2) ÷ col. (1); the reliability of the estimates in cols. (1) and (5) and of the speculative index, T, tends to be highest when this ratio is large.

[c] Ratio of amount of long hedging to amount of short hedging, based on data for "reported" (large-scale) contracts.

[d] Defined as unity plus the ratio, (short speculative contracts) ÷ (short hedging + long hedging contracts); calculated here as $T = (2r_h + r_s)/(1 + r_h)$.

[e] Averages for 1955/56–1957/58; data not available earlier, and market conditions abnormal in 1958/59 owing to uncertain legal status.

[f] Averages for 1949/50–1953/54; market shrank rapidly thereafter and was discontinued in 1957.

based on five-year averages (three years for onions) for eleven commodities.[12] In order to provide comparability between commodities, average amounts of open contracts are expressed in dollar values, obtained by multiplying averages

[12] Statistics of long hedging and of short speculation fail to appear explicitly in the table because space that they would occupy is needed for other information, but it should be noticed that estimates of long hedging and of short speculation, for each commodity, do appear *implicitly* in the table. The long hedging is directly calculable by multiplying the short hedging, H_S', by the hedging ratio, r_h'; and when that has been done, the short speculation is directly calculable because the total of short hedging plus short speculation must equal the total of long hedging plus long speculation ($H_S' + S_S' = H_L' + S_L'$).

in physical units for each commodity by the average price of the commodity for the period of the average.

Simple comparison of the figures in two columns of Table 3 shows that there has been at least a fairly close correspondence between the amounts of long speculation in these eleven commodities (col. 5) and the amounts of short hedging (col. 1). Either the amounts of speculation have been largely determined by the amounts of hedging in the several commodities, or the amounts of hedging have depended largely on the amounts of speculation. A little knowledge of the commodities makes it clear that it has been principally the amount of short hedging that has determined the amount of long speculation, rather than the other way around. For example, consider why bran is at the bottom of the list. The bran market was indeed regarded as a relatively unsatisfactory one for hedging, because it had too little speculation (the market closed November 5, 1957, for lack of enough business to warrant its continued maintenance). Given more speculation, it would doubtless have attracted more hedging than it did; but no amount of speculation in bran could have raised the amount of hedging in that market above, say, the amount of hedging shown for onions. There simply was not enough bran that might have been hedged. Bran is a minor byproduct of wheat milling, and is produced at a fairly regular rate, so that stocks are never more than a small fraction of the annual production.[18]

Wheat, next to the top of the list in terms of either amount of hedging or amount of speculation, had more than twice as much of both as did corn. That may seem inconsistent with the fact that the average value of the annual production of corn is about double the value of the wheat produced annually in the United States. Corn, however, is mainly kept on the farms where it is grown, and there used for feeding, whereas wheat moves quickly into commercial hands, where it tends to be hedged. So there has been in fact only about half as much corn as wheat, in terms of money value, to be hedged. Thus one might continue through the list and find all of the substantial differences in amounts of short hedging explained principally by differences in volume of stocks that holders might reasonably wish to hedge.

One may observe, nevertheless, some irregularity in the relationship between amounts of hedging and of speculation, as shown in Table 3. An extreme example appears just below the middle of the table: soybean meal, with slightly more

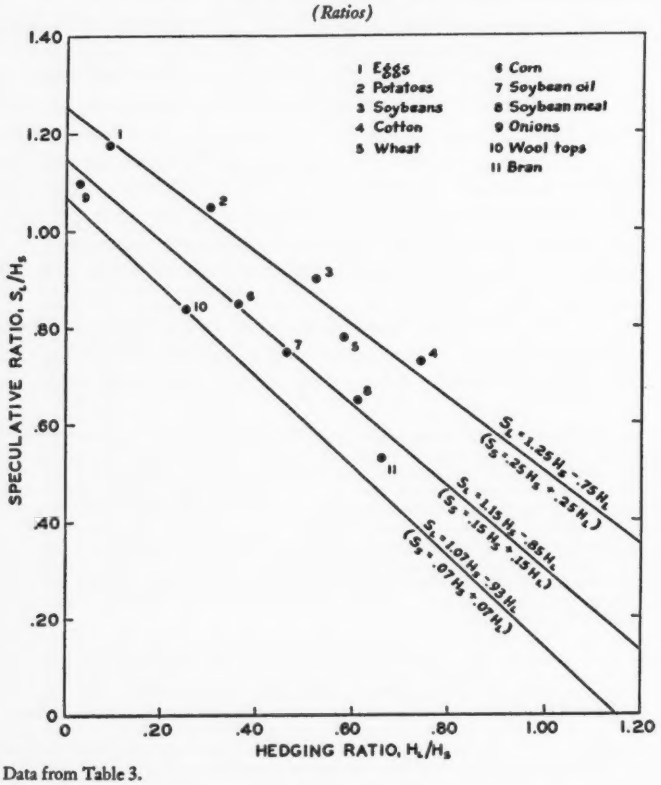
[18] Because no large stocks of bran are ever accumulated, the maximum hedging potential of the bran futures market must be estimated on the basis of another, larger, source of reason for hedging in bran futures, namely the mills' problem of imperfect offset between unfilled flour orders and either wheat owned or long futures contracts held against them. The bran stocks hedged tend to be mainly those of bran in the form of wheat. Flour constitutes, by weight, only some 70–72 per cent of the product of wheat milling (for some data on variation in the conversion ratio, see *19*, pp. 92–97). A calculation based on unfilled flour orders reported by the Millers National Federation for Sept. 30, 1950, a date of near maximum open contracts in the futures markets for bran and shorts (the two major milling byproducts) indicates a maximum hedging potential for mill byproducts about 19 times as great as the actual volume of open contracts in bran and shorts on the date. I am indebted to Roger W. Gray for this calculation.

But it must not be hastily assumed that there might have been nearly 20 times as much hedging of bran and shorts as there was on Sept. 30, 1950, if only there had been enough speculation in those markets to carry the hedging. Mills sell byproducts forward as well as flour, thus greatly reducing the occasion that they found for hedging byproducts. And, perhaps more important, risk reduction is not the primary reason for mill hedging in any case, but certain other advantages that are obtainable from hedging (see *21*, pp. 549–54, 559) and byproduct hedging contributed little in those respects. So I judge that the amount of bran hedging might possibly have reached four or five times the volume that it did, if speculation had been attracted to the market in sufficient volume.

short hedging than eggs, had only 55 per cent as much long speculation as eggs. Such an irregularity in relationship, though inconsequential in comparisons between commodities that show numerous examples of one commodity with ten times as much speculation as another, and several commodities with between one hundred and several hundred times as much speculation as the commodity at the bottom of the list, are nevertheless worthy of notice. To bring these small irregularities into prominence for further study, the speculation-hedging ratio, called for brevity the "speculative ratio," is shown for each commodity in col. 6 of the table.

This speculative ratio is evidently rather closely related to the hedging ratio (col. 4), as should logically be expected. When there is much *long* hedging in a futures market, it serves in part to offset the short hedging, permitting the short hedging to be effectively carried by a smaller amount of long speculation than would be needed to carry an equal amount of short hedging with little long hedging. Chart 2 exhibits graphically the relationship between the speculative ratio and the hedging ratio.

CHART 2.—Average Relation of Amount of Long Speculation, S_L, to Amounts of Short Hedging, H_S, and of Long Hedging, H_L, for Eleven Commodities, Mostly 1954/55–1958/59*



* Data from Table 3.

Many economists, myself included, have tended at times to reason that the amount of long speculation needed in a futures market should depend on the *net* amount of hedging—short hedging minus long hedging. Students of the statistics, however, observed early that the amount of long speculation actually present in futures markets depends primarily on the total amount of short hedging rather than on the net short hedging position. It was evident from this that long hedging serves only in part to reduce the need for long speculation. The main reasons that this is so are easily seen when the nature of the long hedging is understood. Though long hedging commonly arises, directly or indirectly, as an expression of price judgment,[14] it is not always an expression of such judgments, and often it expresses somewhat inexpert judgment. Consequently, most long hedging must commonly be absorbed initially by short speculation, instead of serving immediately to absorb simultaneously placed short hedging orders. Long hedges, moreover, tend individually to have a short life. The flour mill that has hedged a large flour order starts very soon, if not immediately, to buy the wheat for use in filling that order, and "lifts" its hedge piecemeal as it does so. The manufacturer of rolled oats who has bought oat futures as an anticipatory hedge, or the fruit-canner who has bought sugar futures similarly, does not wait long before making merchandising contracts for oats or sugar, and lifting the hedge as he does so.

The extent to which long hedging serves to balance short hedging is calculable (as will be explained presently) from the speculative index shown in the final column of Table 3. By calculating thus the amount of short hedging that, on average, was balanced by long hedging for each commodity,[15] and subtracting that from the total amount of short hedging, we arrive at figures for amounts of short hedging that had to be carried by long speculation (Table 4). These are shown graphically in Chart 3, in comparison with the actual average amounts of long speculation in each commodity.

We thus find that each commodity appears to have had somewhat more speculation than was "needed" to carry the unbalanced short hedging in that commodity. Indeed, the speculative index itself is a direct measure of the amount of that "excess." But at least a large part of what may be called technically an "excess" of speculation is *economically necessary*. This can be seen most readily if we imagine a futures market with *no* long hedging (a condition rather closely approached in the egg market). In such a situation the amount of long speculation *could* exactly equal the amount of short hedging; but it could do so only if there were also *no short speculation*. And that could happen in practice only if the price were so low that no speculator thought the price likely to go lower.

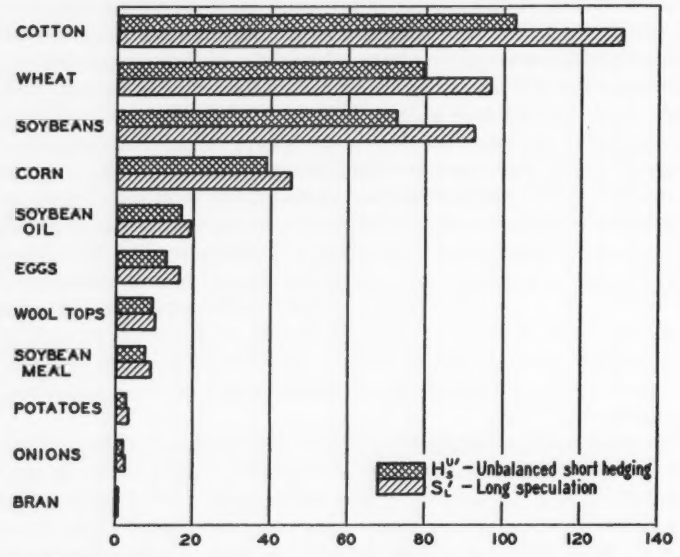
The uncertainties of price appraisal being what they are, a price so low that *no* speculator thought it likely to go lower would assuredly be too low. Any futures market must have more speculation than the minimum technically necessary to

[14] Directly so in the case of anticipatory long hedging; indirectly so for such long hedging as is done by flour mills to offset large forward flour orders placed by bakers. The bakers try to place such orders when wheat, and therefore flour, appears to be priced relatively low.

[15] The appropriate formula, as shown in the appendix, is $H_L{}^B = (2/T - 1)H_L$, where T is the speculative index; H_L is the amount of long hedging; and $H_L{}^B$ is the amount of "balancing" long hedging, that serves to carry, or "balance," an equal amount of short hedging. The reader may be helped by referring at this point to Chart 7, p. 207, which illustrates how the amount of balancing between long and short hedging changes as T changes.

CHART 3.—Comparison of Estimated Average Dollar Values of Unbalanced Short Hedging and Long Speculative Open Contracts, Eleven Commodities, Mostly 1954/55–1958/59*

(Million dollars)



* Data from Table 4.

TABLE 4.—ESTIMATED AVERAGE DOLLAR VALUES OF LONG HEDGING, BALANCED AND UNBALANCED SHORT HEDGING, AND LONG SPECULATIVE OPEN CONTRACTS, ELEVEN COMMODITIES, MOSTLY 1954/55–1958/59*

(Million dollars)

Commodity	Long hedging H_L'	Short Hedging			Long speculation S_L'
		Total H_s'	Balanced[a] $H_s^{B'}$	Unbalanced[b] $H_s^{U'}$	
Cotton	132.5	179.8	76.8	103.0	130.7
Wheat	72.2	125.1	45.8	79.3	97.1
Soybeans	52.9	102.6	30.0	72.6	92.7
Corn	19.4	53.3	14.1	39.1	45.3
Soybean oil	11.9	26.0	8.9	17.1	19.5
Eggs	1.2	13.8	.7	13.1	16.3
Wool tops	3.0	12.1	2.6	9.5	10.1
Soybean meal	8.6	14.0	6.2	7.8	9.0
Potatoes	1.0	3.3	.6	2.8	3.5
Onions	.1	2.0	[c]	2.0	2.2
Bran	.4	.6	.3	.3	.3

* Data as for Table 3, and partly from it.

[a] Equal amounts long as well as short; computed as $(2/T - 1)\ H_L'$.

[b] Estimated total short hedging (Table 3) minus balanced short hedging; occasional discrepancy in final digit arises from rounding figures calculated to more places than are shown here.

[c] Less than 0.05.

carry the hedging, else it will be one in which heavy short hedging causes excessive price depression. How much speculation, beyond an absolute minimum, is needed depends on several circumstances that will be considered presently.

THE SPECULATIVE INDEX AND ITS USE

The speculative index, mentioned above and used in calculation of the amounts of unbalanced short hedging for Chart 3, rests on a simple basic concept that would be most easily applied to a market with no long hedging. In such a case, closely approximated in the egg futures market, the speculative index would be simply the ratio of the amount of long speculation to the amount of short hedging. In symbols, the speculative index would then be given by the formula,

$$T = \frac{S_L}{H_S} = 1 + \frac{S_S}{H_S} \qquad (H_L = 0),$$

where the parenthetical remark at the right is a reminder of the assumption made as a basis for writing the formula.

If there is a purely logical basis for deducing how to write the formula for the speculative index for markets *with* long hedging, it has escaped me. But it can be shown (see the Technical Appendix below) that the data in Chart 2 reveal how the speculative index should be calculated for markets with long hedging; the previous formulas need to be modified only as follows:

$$T = \frac{S_L + 2H_L}{H_S + H_L} = 1 + \frac{S_S}{H_S + H_L} \qquad (H_S \geqslant H_L).$$

Application of this formula, as is indicated by the statement in parentheses, is restricted to conditions in which the amount of short hedging exceeds or equals the amount of long hedging. In the reverse condition, which occurs occasionally in some markets, the formula needs only to be rewritten with subscripts changed, L for S and S for L.

Chart 4 illustrates, for two contrasting commodities, the principles involved in calculation of the speculative index according to the foregoing formula. The data for eggs show very little long hedging, and therefore nearly all of the short hedging must be carried by long speculation. In the data for eggs, the effects of long hedging are inconsequential because there was so little of it.

The data for cotton, however, with nearly four times as much long hedging as there was long speculation, present a situation in which seven-ninths of the short hedging was balanced by long hedging,[16] leaving only two-ninths of the short hedging to be carried by long speculation. And in the cotton market at that time, the greater part of the short speculation was serving to carry a part (one-eighth) of the long hedging, leaving only a small amount of short speculation to be balanced by long speculation.[17]

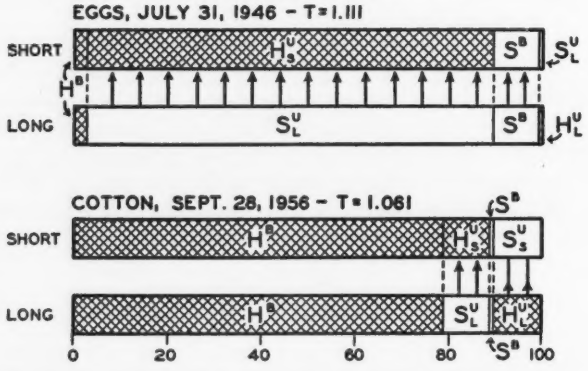
When we start thus with a definition of the speculative index, and proceed

[16] The formula for calculating the amounts of hedging that balance each other, as shown in the appendix, is $H^B = (2/T - 1)H_L$, assuming $H_S > H_L$. For the data on cotton in Chart 4, $T = 1.061$.

[17] The amounts of balancing speculation are given by the formula, $S^B = (1 - 1/T)S_L$.

CHART 4.—Illustrations of Meaning of Speculative Index in Terms of Market Functions*

(Per cent of hedging plus speculative contracts)



* Based on data from special surveys, Table 1; the quantities of hedging and of speculation, and the speculative indexes, are therefore accurately known, except as some contracts may have been incorrectly classified.

to calculate the amounts of hedging and of speculation that balance each other, and the amounts of speculation, both long and short, that serve directly to carry hedging, as seems to me necessary in a nontechnical explanation, we seem to have omitted a step in the reasoning. By what justification do we calculate amounts of balancing of hedging from a speculative index? The answer is that the balancing of mathematically determined parts of both speculation and of hedging is implicit in our second formula for the speculative index. When we used the statistical data of Chart 2 to derive a general formula for the speculative index—one not restricted to application in the absence of long hedging—we in fact determined empirically, from statistics for actual markets, the extent to which long hedging *does* balance short hedging and the extent to which short speculation has to be balanced by long speculation. It was lack of knowledge of these facts that prevented our writing, initially, a formula applicable in the presence of long hedging, and the statistical data supplied that information, in the guise of a general formula for the speculative index.

We need next to test the validity of the formula for the speculative index. For that purpose, the accuracy of the mathematics can here be taken for granted, but the adequacy of the data used cannot. Does the formula derived from the data give sensible results, in reasonable agreement with what is known otherwise about the eleven markets for which we have average values of their speculative index?

In order to appraise the reasonableness of the average values of the speculative index, as shown for eleven commodities in Table 3 and graphically in Chart 5, we need to review the major characteristics of the futures markets for those eleven commodities. The commodities were selected from among 21 for which the necessary statistics are available,[18] with a view to obtaining adequate representa-

[18] The number is 25 if one includes barley, rice, tallow, and middlings, which have been dealt in on futures markets only sporadically and on a very small scale since the war.

tion, within a list of moderate length, of all major different sorts of market conditions.

The present "big three" among futures markets—cotton, wheat, and soybeans—should of course be included. Addition of corn, which ranks next in size, provides, with wheat, enough representation of grains in the list. Soybean oil and soybean meal differ from all the other commodities in the list except bran and wool tops (both included for a different reason) in that they are processed products rather than primary products; and listing them along with soybeans includes the sole existing example of a group of futures markets that deal in a primary product and in all of its major derivatives.[19]

None of the foregoing commodities is used directly for human consumption, so I add eggs, potatoes, and onions to represent consumer goods in the list of commodities. Their special market characteristic is that, because they are not processed on a large scale, there is relatively little long hedging of these commodities. I take three such commodities in order to include among them a fairly mature futures market, eggs (established in 1922), along with the newcomers, potatoes and onions (1941 and 1942, respectively). Other relatively young markets in the list are soybeans (1936), soybean oil (1940), and soybean meal (1940).[20] The most noteworthy special characteristic likely to be present in a young futures market is a tendency for short hedging to be done selectively, according to the price expectations of potential hedgers. Dealers in such a commodity tend to persist for a time in making their own appraisals of price prospects, and hence to hedge stocks only when they expect a price decline, rather than to hedge routinely.

Finally, I add to the list two commodities whose futures markets appear to have been struggling against a handicap of neglect by speculators—wool tops struggling successfully, and bran, unsuccessfully. The futures market for the latter commodity, discontinued in 1957, may be truly an example of a market that died for lack of enough speculation rather than for lack of enough hedging to keep it going. The most thorough discussion of the early history of any futures market that has been published is Stewart's study of the wool top futures market (*8*).

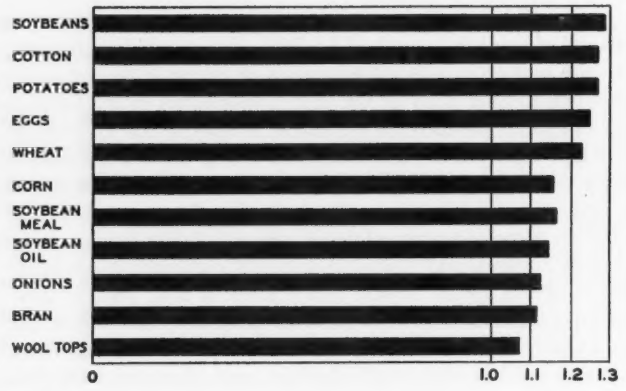
Because the values of the speculative index shown graphically in Chart 5 have been derived from statistics in which open contracts have been only incompletely classified (as speculative, hedging or matching contracts), it will be necessary to keep in mind that the values shown may be more or less inaccurate. Moreover, the values obtained are dependent on the statutory definition of hedging, which has not entirely corresponded, especially prior to August 1956, with what businessmen regard as hedging.

The principal economic circumstances that tend to influence the value of the

[19] Emergence of this condition led to the emergence of a new and unique sort of hedging. Soybean crushers often "hedge their processing margins," either by hedging soybean stocks in short futures contracts for soybean oil and soybean meal, in appropriate proportions, or by acquiring long soybean contracts, before stocks of beans have been accumulated, and simultaneously "selling" appropriate amounts of oil and meal contracts (*1*, pp. 23, 24).

[20] These are dates of the beginning of successful attempts to establish a futures market in each commodity. In at least one instance (potatoes) there was an earlier, but unsuccessful, attempt (*18*, pp. 1, 2). Owing partly to the effects of price controls established during the war, and continued for a time afterward, none of the futures markets established in 1936 or subsequently attracted a large volume of either hedging or speculative open contracts until about 1949, roughly a decade ago.

CHART 5.—Five-year Average Speculative Indexes, T′, for Eleven Commodities*



* Three-year average for onions; data from Table 2. The minimum possible value of the index is $T' = 1.0$.

With one exception, the values shown above appear reasonable in the light of other information about the markets; the index for bran, however, is too high, owing to official classification of anticipatory long hedging as speculation (see text).

speculative index for a commodity are: (1) degree of speculative "interest" in a commodity; and (2) quality of the knowledge and ability of the speculators participating in a market. A third circumstance that may appreciably influence the speculative index is the quality of the price judgments behind the long hedging that enters a market.

Variation in degree of interest in different commodities on the part of skilled speculators presumably occurs principally in the form of a tendency to avoid certain commodities. Skilled speculators shift their attention from one commodity to another with considerable freedom, according to the opportunities that they find in them for speculative profit. By thus shifting from one commodity to another, according to circumstances, they tend to equalize profit opportunities among markets. But certain circumstances can lead speculators to avoid dealing in particular commodities. A commodity that is dealt in only on an obscure market, from which quotations are not widely available, tends to get limited speculative attention. High commission rates, which tend to be necessary in a small market, also discourage speculative use of a market. And informed speculators tend to avoid dealing in a commodity whose price is subject to a substantial degree of control to their disadvantage.[21]

Contrary to an opinion that is sometimes expressed, degree of price variability does not, by itself, appreciably affect speculative interest in a commodity. A

[21] This consideration operates to prevent the existence of futures markets in some commodities, but is rarely of importance, so far as I know, in restricting speculation in commodities for which such a market now exists. Belief that the price was subject to a degree of producer control led the Chicago Mercantile Exchange, a few years ago, to reject a proposal for establishment of a futures market in concentrated orange juice, a commodity for which producers desired hedging facilities.

speculator simply deals in larger quantities if price variations tend to be narrow than if they tend to be wide.

Unskilled spectators tend to be attracted particularly to the more prominent commodities. And because skilled speculators make profits at the expense of unskilled speculators, as well as by providing a desired service to hedgers, the presence of unskilled speculation in a commodity tends to add to the amount of skilled speculation in that commodity. Thus skilled speculation restrains the vagaries of price movement that unskilled speculation tends to produce, in the same way that it sharply restricts the influence of hedging pressure on a market.

The main variations in the speculative index between commodities that should be expected are, therefore, particularly low values of the index for some commodities that, for one reason or another, have attracted relatively little speculation, and rather high values of the speculative index for those commodities that attract a substantial amount of unskilled speculation. If long hedging in some commodities arises largely from particularly well informed forward buying by processors and manufacturers, either in the form of anticipatory long hedging, or in the form of advance orders which in turn are hedged, such long hedging will tend to partially serve the market function of skilled speculation, and thus make the speculative index of the market a fairly low one.

In the light of these considerations, one should expect the speculative indexes for soybeans, cotton, and wheat to be fairly high, as they are; and it may well be true, as the speculative index for wheat suggests, that that commodity no longer has as much special attraction to unskilled speculators as it used to. The speculative indexes for corn, soybean meal, and soybean oil, falling near the middle of the observed range of speculative indexes, are about as should be expected. And wool tops, with the lowest speculative index, was picked for inclusion in this list of commodities in the belief that it is a commodity with a relative scarcity of speculation.

The speculative indexes for potatoes and eggs are higher, in relation to other commodities, than I expected them to be, but my expectations did not take into account the fact that these are the leading commodities on the New York and the Chicago Mercantile Exchanges, respectively. As such, they would tend especially to attract the attention of such unskilled speculators as do business on those exchanges. Because the amount of hedging and total speculation in those commodities is small (Table 4), a small amount of unskilled speculation in potatoes and eggs can represent as large a *proportion* of total speculation in those commodities as occurs in cotton, wheat, and soybeans.

In the case of bran, it seems clear that the speculative index is distorted upward by a peculiarity of the classification of open contracts. The CEA seeks to have contracts classified according to the statutory definition of hedging, and it was only by amendment of the Commodity Exchange Act, approved July 24, 1956, that anticipatory hedging by processors and manufacturers was legally recognized as hedging rather than speculation (*17*). The data for bran, which had an exceptionally large proportion of anticipatory long hedging, all applies to a time when such hedging, if classed in accordance with the relevant statute, would have been listed as speculation. The data for the other commodities cover years during most of which anticipatory long hedging was legally recognized as

hedging. If open contracts in bran had been classed according to the present statutory definition of hedging, bran might well have been found to have the lowest speculative index of all.

Potatoes, eggs, and onions, being primarily consumer goods, have little anticipatory hedging by processors and manufacturers, but data from CEA special surveys for potatoes and onions show a large amount of long "speculation," as it is classed, by dealers. A large fraction of the long contracts held by dealers in these commodities appears classifiable, by business standards and on economic grounds, as anticipatory hedging by dealers. If a dealer with storage facilities in the country accumulates stocks of potatoes or onions while growers are selling heavily just after harvest, that is not regarded as speculation, by business standards. If a terminal-market dealer, lacking economical storage facilities, makes contracts directly with country dealers for purchase of potatoes or onions, thus sharing the burden of stock-carrying, that is no more speculative than the holding of stocks by a country dealer. If then, given a futures market, terminal-market dealers accumulate long futures contracts merely as a convenient temporary substitute for making purchase contracts directly with country dealers, is the holding of those futures contracts any more speculative than the holding of contracts directly with country dealers? If long futures contracts held by dealers, in amounts appropriate to normal operation of the business of such dealers, had been classed as hedging contracts, potatoes and onions would have had somewhat lower speculative indexes than those shown in the accompanying chart.[22]

The one complete CEA special survey for eggs that is available gives evidence of no large amount of anticipatory long hedging by dealers in eggs. This is reasonably to be expected, because eggs are held in cold storage, mainly in the larger cities, and the dealers there can accumulate such stocks as they wish in their own hands, instead of relying on purchase contracts with country dealers, or on anticipatory long hedging. There is consequently no reason to suppose that the speculative index for eggs is appreciably distorted upward by classification as speculative of futures contracts regarded, from a business standpoint, as anticipatory hedging.[23]

[22] According to the classifications of open contracts by occupation of the holder, as given in CEA reports on special surveys, onions appear to have had a good deal more anticipatory long hedging that was classed as speculation than did potatoes, and much more than eggs. Taking the onion data for October 31, 1956, as classified between speculation and hedging by the CEA (*14*, p. 5), and eliminating matching contracts, the value of the speculative index for onions on that date was

$$T = 1 + \frac{S_S}{H_S + H_L} = 1 + \frac{587}{2979} = 1.197.$$

But of the long contracts classed as speculative, 2,024 carlots were reported as held by persons or firms concerned with the growing, marketing or processing of onions (*14*, p. 12). Of these, some 200 carlots were probably matched by offsetting short contracts in individual accounts, and I judge it possible that 1,500 carlots of the remainder might have been classifiable, on business standards, as anticipatory long hedging. Shifting the classification of 1,500 carlots from long speculative to long hedging, however, would reduce the speculative index only to $T = 1 + 587/4479 = 1.131$. This is not a suspiciously low value of the speculative index for a date of near-maximum short hedging, but a fairly high value.

[23] The general outcome of the foregoing appraisal of average values of the speculative index for eleven commodities is rather different from what I expected when I undertook it. The tests of reliability of the estimation procedure made for special survey dates (Table 2) had led me to expect that some average values of the speculative index derived by that procedure would have to be judged appreciably in error, owing to inability of the estimation procedure to cope adequately with the short-

Having found that a five-year average speculative index of about 1.15 appears to characterize futures markets that have neither a peculiar shortage of speculation, nor any substantial amount of particularly unskilled speculation, we have in the speculative indexes a basis for estimating the proportion of unskilled speculation in, say, the soybean market, which is the one with the highest speculative index, namely 1.28. On the reasonable supposition that the amount of relatively skilled speculation needed to satisfactorily "carry," or balance, a given amount of unskilled speculation, is the same as the amount of skilled speculation necessary to carry a given amount of hedging, the problem is a simple one in arithmetic. Subtracting 1.15 from 1.28, dividing by 1.28, and converting to a percentage, we arrive at the conclusion that about 10 per cent of the speculation in the soybean market was sufficiently unskilled that it had to be offset, like hedging, by better-informed and more skillful speculation.

CONTINUOUS RESPONSE OF SPECULATION TO HEDGING

Next we should examine the degree to which speculation responds to the continuously changing needs for hedge-carrying in a given market. For that purpose I take the wheat market, which is the one in which I am best acquainted with hedging operations and can interpret changes in short and long hedging most reliably.

The available data permit following the course of hedging and speculation, not quite week by week, but as of the middle and end of each month. They are shown in this detail, for three years, in Charts 6 and 7, and as of the middle of each month in Table 5. The second of the two charts serves primarily as an aid to interpreting the first. In Chart 6 interest focusses especially on the course of long speculation, which has to support all of the stock-carrying short hedging that is not balanced by long hedging. Therefore Chart 6 is drawn with the data on long speculation (long open contracts) plotted upward from the base line, and short speculation plotted downward. Short hedging is therefore plotted upward, for ready comparison with the long speculation, and long hedging plotted downward from the base line, for comparison with the short speculation. The speculative index is plotted to a scale with $T = 1.0$, the minimum possible value of the index, at the base line used for the other data.

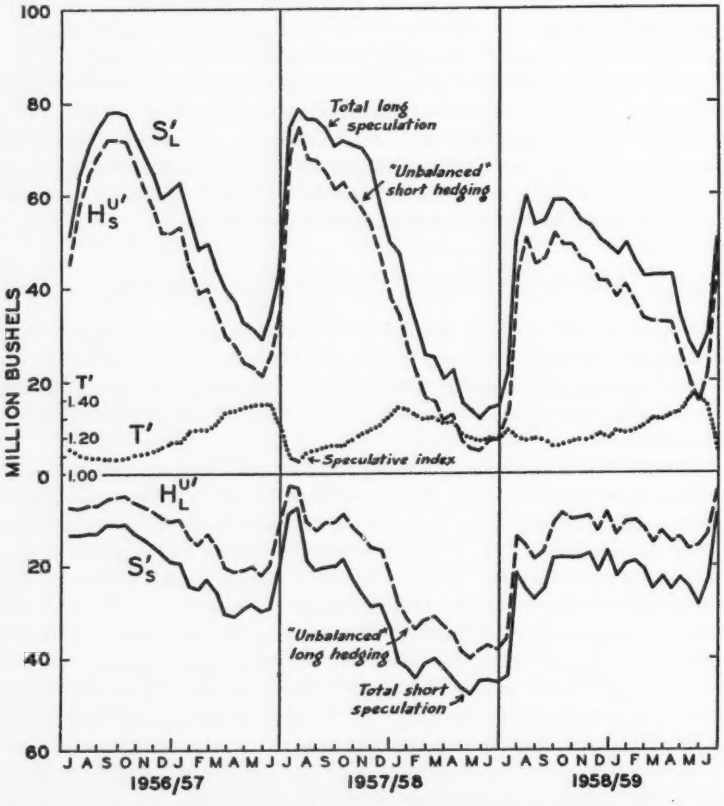
Chart 7, which shows only hedging data, in comparison again with the speculative index, needs to have hedging plotted as in the previous chart, hence short hedging is plotted upward and long hedging downward, though it would seem more logical to show them otherwise if the chart were not merely a supplement to the previous one. It shows the totals of short and of long hedging, and the portions of each that balance. The difference between the balancing portions of the two sorts of hedging and the total of each, is the "unbalanced" short and long hedging of the previous chart.

The extent to which long hedging balances short hedging (or, when long

comings of the original data. But I find myself unable to say confidently that the calculated average value of the speculative index is appreciably in error for any commodity except bran, and the error there seems attributable to faulty classification of the contracts classified, not to incompleteness of the official classification. Perhaps those characteristics of the data that produced clear imperfections of the estimates on individual dates are peculiarities that tend to cancel out in long-period averages.

CHART 6.—Changes, Semi-monthly, in Amounts of Speculative and of Unbalanced Hedging Contracts, Long and Short, for Wheat, June 1956–July 1959*

(Million bushels)



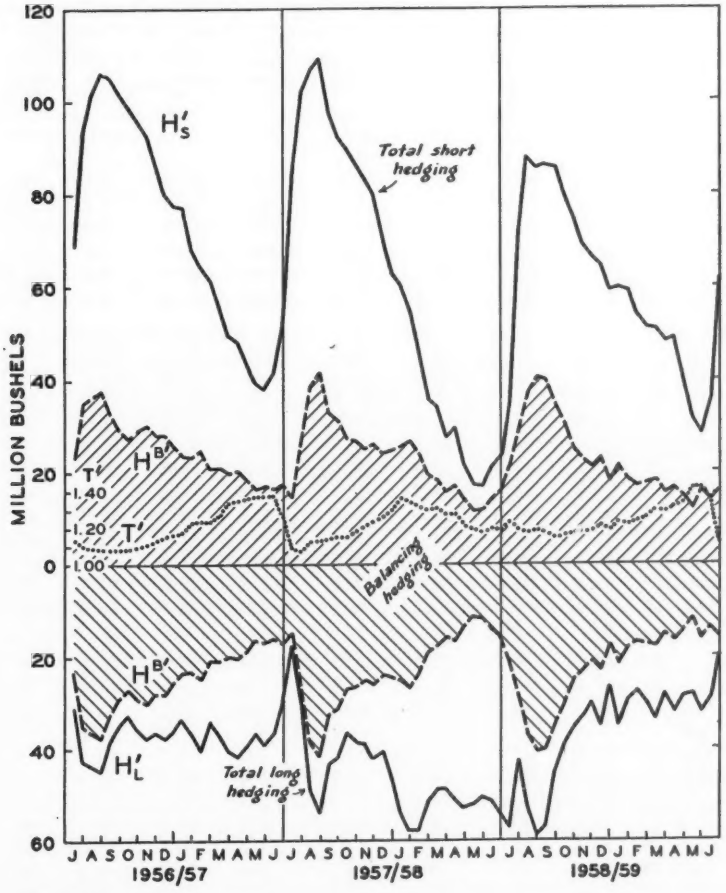
* Data from Table 5 and a like manuscript table including month-end statistics.

The total of long speculative open contracts in wheat during these three years exceeded the amount of "unbalanced" short hedging (see next chart) by a nearly constant 8 to 10 million bushels except for a bulge that carried it to 12.8 million on November 30, 1957. "Unbalanced" long hedging was carried by short speculation with the same margin of surplus as for long speculation. The speculative index (T') is close to unity when there is little short speculation relative to the amount of long speculation, as it normally is when hedging is heavy, and increases when either the amount of short speculation increases or the amount of long speculation decreases. (When hedging is net long, as during January–June 1958, speculation must be net short, and the formula for the speculative index is altered accordingly.)

hedging exceeds short, the extent to which short hedging balances the long) depends both on the amount of long (or short) hedging and on the speculative index, as can readily be seen from the chart. At those times when the amount of short hedging is so large as to strain the carrying capacity of speculation in a market, the price at which hedged stocks will be carried depends relatively heavily

CHART 7.—Changes, Semi-monthly, in Amounts of Hedging Contracts, Long and Short, and in Balancing Portions of Hedging, Wheat, June 1956–July 1959*

(Million bushels)



* Data as for Chart 6.

When the pressure of short hedging on a futures market is heavy, requiring a great amount of long speculation to carry it, the speculative index tends to fall close to unity. When it does so, most of the long hedging in the market serves to balance an equal amount of short hedging, thus decreasing the amount of long speculation needed. The amount of short hedging of wheat follows a smooth course, corresponding closely with the volume of commercial stocks to be hedged. The amount of long hedging, on the other hand, tends to change erratically, under the influence of spurts of buying, or the withdrawal of buying, by certain handlers of the commodity (in wheat, chiefly bakers and exporters). Unusual behavior in such buying accounts for the abnormal course of the speculative index for wheat during the latter half of 1957/58.

on the amount of long hedging present to aid in carrying the short hedging. At such times, a large fraction of the long hedging—up to 89 per cent in these data (July 31, 1957)—serves to directly balance an equal amount of short hedging. At

TABLE 5.—ESTIMATED TOTAL AMOUNTS OF LONG AND SHORT HEDGING AND SPECULATION, AND OF BALANCED AND UNBALANCED HEDGING, AND SPECULATIVE INDEX, WHEAT, MONTHLY, JULY 1956–JUNE 1959*

(Million bushels; ratio)

Date	Hedging		Speculation		Speculative index	Balanced hedging[a]	Unbalanced hedging	
	Long H_L'	Short H_S'	Long S_L'	Short S_S'	T'	$H^{B'}$	Long $H_L{}^{U'}$	Short $H_S{}^{U'}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1956								
July 15	30.7	68.5	51.4	13.6	1.137	23.3	7.4	45.2
Aug. 15	43.8	100.8	70.0	13.0	1.090	36.6	7.2	64.2
Sept. 15	38.5	104.8	77.8	11.5	1.081	32.7	5.8	72.1
Oct. 15	32.4	98.8	77.7	11.2	1.085	27.3	5.1	71.5
Nov. 15	37.5	91.9	68.5	14.1	1.109	30.1	7.4	61.8
Dec. 15	37.9	80.1	59.6	17.4	1.147	28.2	9.7	51.9
1957								
Jan. 15	33.7	77.0	62.8	19.4	1.175	23.6	10.1	53.4
Feb. 15	40.3	63.8	48.6	25.0	1.241	24.6	15.7	39.2
Mar. 15	36.8	55.7	44.4	25.5	1.276	20.9	15.9	34.8
Apr. 15	41.9	48.2	37.5	31.2	1.346	20.4	21.5	27.8
May 15	36.4	39.5	31.5	28.4	1.374	16.6	19.8	22.9
Jun. 15	36.4	41.3	34.3	29.4	1.378	16.4	20.0	24.9
July 15	17.8	83.5	74.7	9.0	1.089	14.9	2.9	68.6
Aug. 15	49.2	106.6	76.4	19.0	1.122	38.5	10.7	68.1
Sept. 15	43.7	97.6	74.3	20.4	1.144	32.7	10.9	64.9
Oct. 15	36.4	89.7	71.8	18.5	1.147	27.1	9.3	62.6
Nov. 15	38.7	82.6	70.0	26.1	1.215	25.0	13.7	57.6
Dec. 15	40.4	69.5	57.6	28.5	1.259	23.8	16.6	45.7
1958								
Jan. 15	53.4	60.1	47.5	40.7	1.358	25.3	28.1	34.8
Feb. 15	57.8	45.6	32.1	44.3	1.310	24.0	33.8	21.6
Mar. 15	49.1	33.9	24.9	40.1	1.300	18.2	30.9	15.7
Apr. 15	51.4	29.6	22.4	44.2	1.277	16.8	34.6	12.8
May 15	52.0	17.3	13.4	48.1	1.193	11.7	40.3	5.6
Jun. 15	51.5	20.7	14.0	44.8	1.194	14.0	37.5	6.7
July 15	57.4	35.1	21.8	44.1	1.236	27.0	35.7	13.4
Aug. 15	52.5	87.7	59.8	24.6	1.176	36.8	15.7	50.9
Sept. 15	56.9	86.2	54.5	25.2	1.176	39.9	17.0	46.3
Oct. 15	38.7	79.3	58.8	18.2	1.154	29.9	8.8	49.4
Nov. 15	32.6	68.8	54.4	18.2	1.180	22.7	9.9	46.1
Dec. 15	35.4	64.3	50.4	21.4	1.215	22.9	12.5	41.4
1959								
Jan. 15	34.8	59.6	47.1	22.4	1.237	21.5	13.3	38.1
Feb. 15	27.4	53.7	45.5	19.1	1.236	16.9	10.5	36.8
Mar. 15	33.6	50.8	42.3	25.1	1.297	18.2	15.4	32.6
Apr. 15	31.8	48.8	42.3	25.3	1.314	16.6	15.2	32.2
May 15	28.2	31.5	27.8	24.5	1.410	11.8	16.4	19.7
Jun. 15	28.8	36.1	30.1	22.8	1.351	13.8	15.0	22.3

* Computed as described in text, from data in U.S. Dept. Agr., *Commodity Futures Statistics*, Stat. Bulls. Nos. 221, 239, 256.

[a] Equal amounts long and short.

times when the hedging load is light relative to the amount of speculation in a market (the speculative index high), the price is determined mainly by speculative opinion, with little reliance on long hedging to carry part of the short hedging (or little reliance on short hedging to carry part of the long hedging). It is for this reason that the amount of balancing hedging, long and short, is a varying proportion of the total long (or of the total short) hedging. In the data shown in the chart, the amount of balancing hedging fell as low as 41 per cent of the smaller of the two hedging totals (May 31, 1959).

Two mathematical relationships between curves in Chart 6 deserve comment: (1) The excess of long speculation, S_L', over unbalanced short hedging, $H_S^{U\prime}$, is an excess that should be measured by the speculative index, according to our definition of that index;[24] and so it is—$S_L'/H_S^{U\prime} = T$. (2) Because total long contracts in a futures market must equal total short contracts, the excess of total short speculation, S_S', over unbalanced long hedging, $H_L^{U\prime}$, must equal the excess of long speculation over unbalanced short hedging.

The close correspondence between changes in the amount of long speculation and changes in the amount of unbalanced short hedging needing to be carried by long speculation is so obvious as to require no verbal emphasis. The amount of short speculation obviously varied in about equally close correspondence with variations in the amount of unbalanced long hedging. In the latter connection, it should be noted that the amount of long hedging, which depends primarily on the opinions of export buyers and of bakers regarding whether the price of wheat (and hence of flour) is likely to rise or fall, was more erratically variable than was the amount of short hedging (Chart 7).

Less conspicuous than the close correspondence between the two curves in each pair in Chart 6, but at least equally important, is the evidence that the chart gives of an approximately constant margin of difference between the two curves in each pair. This difference represents the amount of "unneeded" speculation, short and long, in the market. It is, of course, "unneeded" only in a physical, or arithmetical, sense. Economically, it is needed because no one can judge *accurately* what price is warranted by known supply and demand conditions at any given time, and price opinions among speculators therefore differ. This margin gives protection against the price, at times of heavy hedging pressure, falling so low that *no* speculator thinks it likely to go lower.

The amount of protective margin of "unneeded" speculation that is *economically needed* in a market depends primarily on the amount of divergence of price judgment that exists among speculators. It tends obviously to be relatively narrow if most speculators are expert and well-informed, and to be relatively wide if there is a considerable group of inexpert or ill-informed speculators in the market. And, what is not so well recognized, the amount of "unneeded" speculation that is present in a market depends on the extent to which speculators specialize in giving attention to particular sorts of market information.

A great amount of economic information concerning current supplies and probable future supplies, and concerning current and probable future consumption demand—the latter influenced by consumer incomes and by prices of other

[24] This statement and the one that follows must have the words "long" and "short" interchanged when long hedging exceeds short hedging (in accordance with the definition of the speculative index).

commodities, both in this country and abroad—needs to be considered if the price is to reflect well the available supply and demand information. No one man can get all that information promptly and appraise it wisely. If all speculators give their attention to the same information, they may all form nearly the same price opinions, with the result that there will be little divergent speculation. But in that case there will be times when the price will not conform well to the basic supply and demand conditions, because everybody has overlooked some important information. On the other hand, if different groups of speculators specialize in giving attention to different classes of information, their price opinions will tend to differ considerably, giving rise to a good deal of divergent speculation. And with such specialization by speculators, there is less likelihood than otherwise that important economic conditions will fail to be reflected properly in the price.

Evidently, then, a widening of the margin of "unneeded" speculation in a market, as in wheat during October-November of 1957, may reflect either of two conditions. It may reflect entry into the market of a considerable group of inexpert or ill-informed speculators; or it may reflect the recognition by one group of expert speculators of significant economic conditions or prospects that are currently being ignored by other, equally expert and generally well-informed, speculators. One would like to know to what extent each of these two possible explanations properly accounts for widening or narrowing of the margin at particular times, but presumably the statistics of hedging and of speculation cannot reveal that by themselves. We cannot undertake to fully explore such questions here.

I remarked earlier that there have been three obstacles to acceptance of the evidence that speculation enters a futures market in response to the needs for carrying hedges placed in the market, and enters in an amount fairly appropriate to the needs for carrying the hedging. The common impression that speculation in futures proceeds with little or no regard to hedging has been shown above to rest on a practice of identifying speculation with the readily visible evidences of it, namely the transactions by which it is initiated and terminated, whereas it is properly to be measured, in futures markets, by the volume of open contracts *held* speculatively. The obstacle of unsatisfactory character of the available data on hedging and speculative open contracts, in its original form, has been dealt with above by applying new and improved estimation procedures. There remain for consideration now the questions: What incentives do speculators have for adjusting the amount of speculation to the needs for carrying hedges? And how are speculators able to recognize hedging needs?

The incentive that speculators have for carrying hedges is simply the opportunity to profit by doing so. Speculators, as a group, can make profits only by "buying" from short hedgers at prices lower than those at which they can "sell" later, or by "selling" to long hedgers at prices higher than those at which they can "buy" later. An individual speculator is as willing to make a profit by dealing with another speculator as by dealing with a hedger, but speculators as a group can profit only by rendering a service for which hedgers are willing to pay. Though hedgers forego whatever profits speculators, as a group, make, they do so for the sake of one or another of the advantages obtainable by hedging. The incentive for speculators to seek to carry hedges is, then, simply the profit motive.

There are, broadly, two ways in which speculators recognize the profit opportunities presented to them by the offering of hedging contracts in the market. One of these is by such criteria as are used by scalpers and other quick-turn speculators. They learn, perhaps most importantly, to judge with satisfactory reliability when a small price dip is the result of "selling" pressure that will soon end and be followed by price recovery, and when a small price advance is the result of "buying" that will be similarly short-lived. The dips and advances on which scalpers operate are those very small ones associated with oscillation of the price between what amount to "bid" and "asked" prices. Besides the commonly recognized bid and asked prices that are close together, but are subject to rapid shifts in level, there exist in any market analogous pairs of prices that are farther apart, but more stable. In an *inactive* market it is these more widely spaced limits that provide the quoted bid and asked prices. In an active market, individual hedging orders of moderate size move the price only within the range of the commonly quoted and closely spaced bid and asked prices, while very large hedging orders, or waves of hedging, move the price through wider limits. Scalpers, who normally follow each "purchase" with a "sale" a few minutes later, tend to absorb, initially, the individual hedging orders of moderate size; other traders, willing to take larger market positions, and to hold them for a day, or a week, absorb the larger hedging orders and the waves of hedging, long or short. We noted above, in comment on Chart 7, evidence of the erratic waves of long hedging in wheat that have to be absorbed by that market.

Short hedging tends to enter the market for any annual crop in large quantity once a year, and much of it must be carried for many months. The various sorts of quick-turn traders help to carry this hedging for a time after it enters the market because, while the volume of short hedging is building up, they tend to operate always on the long side. Though it is commonly said that scalpers and other quick-turn traders always stand equally ready to either "buy" or "sell," this is not strictly true. Though they seek their profits on more or less quick turnover of contracts, they always seek to judge the longer-run price prospects, and normally take positions only on one side of the market, either long or short according to their judgment of those longer-run prospects. They do this partly as a means of selecting the larger profit opportunities, but more particularly as a means of limiting risks of loss.

But in the main, short hedges must be carried by speculators who are willing to hold positions for longer periods than the quick-turn traders like to carry their holdings. The incentive for them to carry short hedges must be that they think the price low enough to warrant taking a long position and holding it for a considerable period—not necessarily for the six or eight months or more that much of the short hedging will have to be carried, but at least for a substantial fraction of that time. Do speculators have such good price judgment that many of them are in fact led to "buy," and to hold contracts over fairly long periods, by recognition that the price is only moderately depressed by heavy short hedging? Economists, at least, have found it difficult to credit speculators with such good price judgment as seems necessary in order that speculation should respond sensitively to the hedging needs of a market.

My first clue to the answer to this troubling question was given me by professional speculators. With few exceptions, they have told me that they do not

try to judge what the price "ought" to be. They also often say that they disregard the market news, to which economists properly believe that speculators should be alert if they are to serve their economic function well. In order to understand what speculators are trying to say when they make these statements, it is necessary to recognize that neither statement is true in the same sense that most hearers tend to understand it.

Consider the latter of the two statements first, since it is the more readily interpreted. It is a statement that is made characteristically by quick-turn speculators whom one would expect to be especially alert to new market information. Watch their behavior at close range and you observe that they are indeed eagerly alert to new market information. What they mean when they say that they disregard the market news, is that what passes generally as market "news" is to them like last week's newspaper. And even so, they do not disregard it. It tends to be an explanation of the past rather than an indicator of the future, and most speculators follow it closely as an aid to interpreting what has happened lately in the market.

To understand how speculators are able to act as though they could form highly reliable judgments of what the price "ought" to be, it is particularly necessary to understand what they mean when they say they do not try to form such judgments. My best help on this point came from a speculator from whom the statement was superficially a believable one, because he was a "day trader" specializing in scalping and other quick-turn speculation within the day. He kept careful notes for me for a week, recording the thoughts uppermost in his mind at the beginning of each day's business, and every transaction that he made, and tried to explain the reason for each transaction.[25]

The notes showed that he was giving close attention to a great amount of information pertinent to appraisal of what the price "ought" to be. And quite obviously he was doing so for profit, not out of mere curiosity or general interest.

Why, then, did this man tell me that he did not try to judge what the price "ought" to be; and why have others, of whom it was at least equally untrue, said the same thing? They are all very keenly aware of the unreliability of any individual's judgment of what the price "ought" to be.[26] What they meant was that they never rely heavily on their personal judgment on that score. They all have great respect for the "judgment of the market" as an expression of the

[25] Keeping such notes was itself a remarkable performance, because he was doing a bewilderingly complicated business all the while. My debt of gratitude to him must be obvious.

[26] There is much reason to believe that the principal explanation of the tendency for unskilled speculators to lose money rapidly is their naïve faith in their own judgments of what the price ought to be. They tend to pit their opinions directly against the almost certainly better "judgment of the market." If they were merely gambling, as a speculator might by merely tossing a coin to determine, initially, whether to "buy" or to "sell," and next day, whether to hold his previously taken position or close it out, they would tend to break even, apart from commission charges. Actually, they do much worse than that; which must mean that they are using judgment, but bad judgment. The outstanding factual analysis of speculator experience (9) attributes the losses of unskilled speculators largely to a tendency to "cut profits and let losses run"; but it can be demonstrated that the very real tendency that is commonly expressed in those words cannot produce an over-all tendency toward loss except when combined with use of bad market judgment otherwise. To test this assertion, the reader may try to devise a trading system based on coin-tossing that would tend to produce losses. One such system would use the rule: "buy" or "sell" according to the toss of a coin, then close out the trade at the first opportunity to take either a one-cent profit or a ten-cent loss, and repeat indefinitely. The mathematical expectation for such a system is that the "trader" will break even. If that were not so, a reversal of the rule would provide an easy route to wealth.

pooled opinions of many people—a sort of average of many opinions, in which individual errors of judgment tend to cancel out. They know also, consciously or unconsciously, that the market can be more or less mistaken, and that they must make their profit by taking advantage of the market's "mistakes." Their problem is to find means of striking a delicate balance between relying on their own fallible judgments, but not relying on them too much, and relying on the "market judgment," yet finding opportunities to make profits from disagreeing with the market judgment.

Different speculators find more or less different ways of striking this balance. A typical sort of solution is that found by my friend the "day trader." He formed his opinions on which way the price ought to move;[27] but he gave expression to those opinions indirectly and cautiously, using them as a guide to actions in which other considerations entered also. For example, if he expected a price rise for "fundamental" reasons, his quick-turn trading would tend to be always on the long side ("selling" only to close out long positions taken previously). In such ways skilled speculators make their opinions effective as part of the pool of many opinions that are reflected in the market price, and at the same time use the pooled market opinion as a guide in forming what an economist, if not they themselves, would call their opinions of what the price "ought" to be.

SUMMARY

The main conclusion that flows from the foregoing analysis and evidence is only a more precise and stronger statement of one reached by a few students of futures markets long ago, just a few years after the commencement of regular reporting of open contracts on futures markets. The main statistical evidence provided as a basis for the present version of the conclusion appears graphically in Charts 3 and 6 above (pp. 198 and 206). Chart 3 shows that the amount of long speculation, measured in dollar value of open speculative contracts, has differed greatly between commodities, some commodities having ten, twenty, or as much as several hundred times as much speculation as others; and that these differences in amounts of speculation depend primarily on the amounts of hedging in the markets. And Chart 6 illustrates the very close correspondence between changes from month to month, and within months, in amounts of speculation and of hedging. The conclusion that follows is obvious: Futures markets are primarily *hedging* markets. The amount of speculation in any futures market depends primarily on the amount of hedging that enters the market, and no such market can exist without a sufficient amount of hedging to support it.

These characteristics of futures markets could not be recognized until after statistics on open contracts were collected, because, in the absence of such statistics, people could observe only the transactions by which individual speculators initiated or terminated a period of speculative *holding* of futures contracts. People thus fell into the habit of identifying speculation with the transactions rather than with the *speculative holding* that is its essence, and in consequence were misled.

[27] One morning for example, his opening notes included the comment: "I was even and hadn't a clue, so decided to take it very easy today."

One obstacle to recognition of the dependence of speculation on hedging has been a belief that speculators have no great incentive to respond to the hedging needs of a market, and no reliable guide for adjusting their speculation to the hedging needs of the market. The final section above explains briefly why speculators try to respond to hedging needs, and how they are enabled to do so both sensitively and reliably.

The basic statistics on hedging and speculation, though published regularly now for a long list of futures markets, are incomplete, and especially so for speculation. In the past it has been usual to deal with this situation very crudely by taking the amount of hedging to be measured by the incomplete record of "reported" hedging, and taking the amount of speculation to be measured by "reported" speculation plus all nonclassified futures contracts. This procedure obviously gave a distorted comparison, but it had to be used until a better one was discovered. Even that crude procedure had sufficed to reveal the existence of a fairly close correspondence between amounts of short hedging and of long speculation in futures markets, but a better procedure was needed before the relation between speculation and hedging could be seen very clearly.

So long as only very crude comparisons could be made between amounts of speculation and of hedging, it was possible to learn only that amounts of long speculation corresponded roughly with amounts of short hedging. By using improved statistical estimates of total amounts of hedging and of speculation, we have gained a more accurate knowledge of the relation between long speculation and short hedging in futures markets and have discovered, additionally, that the amount of short speculation in a market is strongly influenced by the amount of long hedging. This discovery has been aided by solution of the problem of measuring the extent to which long and short hedging directly balance each other. Students of the statistics of futures markets recognized early that long hedging served in part to offset short hedging, but that the offset was only partial. Derivation, through statistical and mathematical analysis, of a *speculative index,* based on the available statistics of hedging and speculation, has led to a formula by which to calculate the amounts of long and of short hedging that balance each other. The extent of direct balancing varies with the speculative index, for a reason that has been explained above (p. 200).

TECHNICAL APPENDIX

1. *Procedure.* In a full statement of the argument that follows, the terms to be used and the formulas derived would differ systematically according to whether $H_S \geqslant H_L$, as is usually the case in any futures market, or the infrequent opposite condition exists. The argument would be complicated, and nothing would be gained, if the two possible conditions were carried forward simultaneously. Therefore, I proceed for the most part on the assumption that $H_S \geqslant H_L$, and at the end I note what changes are required to fit the condition, $H_L > H_S$. Under the final heading two parallel sets of formulas are given for computational use. It is mainly in computational work that there is need to take account of whether $H_S \geqslant H_L$ or not. At the point $H_S = H_L$, the two sets of formulas give identical results.

2. *Estimation of totals of speculation and hedging.* The problem of estimating

total amounts of speculation and of hedging, long and short, is one of making an allocation of nonclassified contracts, N, among the categories of hedging, H, speculation, S, and matching contracts, M (the latter being long and short contracts that offset each other in individual accounts). To these letters we add subscripts, $_L$ and $_S$, to designate whether the contracts are long or short. Total short hedging, for example, may then be described in relation to the officially reported statistics as consisting of $H_S = H_S^* + H_S^\circ$, where the asterisk designates open hedging contracts explicitly classified ("reported") in the published statistics, and the superscript zero designates hedging contracts of "non-reporting" (small-scale) holders of short contracts. *Estimates* of total short hedging are designated H_S'. Statistics and estimates of total contracts in other categories than H are similarly distinguished by superscripts, in addition to the subscripts distinguishing long from short contracts.

Several necessary equalities have to be borne in mind, represented by the following:

$$H_S = H_S^* + H_S^\circ \tag{1}$$

$$H_S + S_S = H_L + S_L \tag{2a}$$

$$M_S = M_L. \tag{2b}$$

Equation (1) holds with replacement of S or M for H, and with either subscripts $_S$ or $_L$ throughout. Equations (2) hold either for true values of the quantities, as written above, or for estimates of each, such as H_S', etc. (see Chart 1).

I make only two assumptions that affect estimates of the ratios among the four quantities, H_S', H_L', S_S' and S_L', and these lead directly to the estimation equations for two ratios,

$$r_h' = \frac{H_L'}{H_S'} = \frac{H_L^*}{H_S^*}, \qquad (H_S^* \geqslant H_L^*) \tag{3a}$$

$$r_s' = \frac{S_L'}{H_S'} = \frac{S_L^* + N_L}{H_S^* + N_S} = \frac{S_L + H_L^\circ + M_L^\circ}{H_S + S_S^\circ + M_S^\circ} \quad (H_S^* \geqslant H_L^*). \tag{3b}$$

From these it follows obviously that $H_L'/S_L' = r_h'/r_s'$, and any other desired ratio between estimates may be obtained with the further aid of the equality, $H_S' + S_S' = H_L' + S_L'$. For example, $S_S'/H_L' = 1 + (r_s - 1)/r_h$. If $H_L^* > H_S^*$, better reliability is obtained by basing estimates on the ratio

$$r_s' = \frac{S_S'}{H_L'} = \frac{S_S^* + N_S}{H^* + N_L} \qquad (H_L^* > H_S^*). \tag{3c}$$

The same symbol, r_s', is used in both (3b) and (3c) above because the parenthetical remark at the right constitutes a part of each expression. We shall deal throughout with expressions in which subscripts of the variables interchange when $H_L > H_S$. The ratio r_h' might be defined without regard to the relative magnitudes of H_S^* and H_L^*, but to do so would require treating expression (3a) differently than other expressions, and thus tend to make trouble.

One further assumption is needed in order to assign a value to any one or more of the desired *quantities,* such as H_S', and for that purpose I assume that $H_S^\circ = H_L^\circ + M_L^\circ$, (if $H_S^* \geqslant H_L^*$), which leads to the estimation equation,

$$H_S' + S_L' = H_S^* + S_L^* + N_L \qquad (H_S^* \geqslant H_L^*). \tag{4}$$

Consequently, this assumption, along with the two previous ones, allows estimation of the six quantities, H_S, H_L, S_S, S_L, M_S and M_L, the latter two of which are of course equal.

Though each of the assumptions made above is subject to error, their usefulness in combination is to be judged in relation to the assumptions implicit in the previously general practice of taking hedging to be satisfactorily measured by H_S^* and H_L^*, and speculation by $S_L^* + N_L$ and $S_S^* + N_S$. That implicitly assumed that $H_S^\circ = H_L^\circ = M_S^\circ = M_L^\circ = 0$, which involves three distinct assumptions that together must ordinarily, if not always, be farther from the truth than the three assumptions that we make here.

3. *The speculative index.* Derivation of the speculative index starts from the obvious proposition that, in the absence of long hedging, the ratio, $r_s = S_L/H_S$ would make a good index of the relation of total speculation to the amount of speculation "needed" to carry the hedging in the market. In the absence of long hedging, $S_L = H_S + S_S$, hence for that condition the speculative index, T, may be written, $T = 1 + S_S/H_S$. The question then arises: How should the speculative index be caculated in the presence of long hedging?

This problem may be treated empirically by ascertaining how r_s varies with r_h, and for that purpose Chart 2 was constructed. If the eleven observations shown in the chart could all be regarded as samples from a common population, an appropriate procedure would be to compute a least-squares regression to express the relation between the two ratios. But I knew that the observations came from markets having differing speculative characteristics, making it appropriate to derive more than one line of relationship, each intended to represent the relation between the two ratios in a group of markets with common speculative characteristics. When that was undertaken, it became apparent that each line drawn tended to have an equation that could be written either in the form, $S_L = (1 + \alpha)H_S - (1 - \alpha)H_L$, or as $S_S = \alpha(H_S + H_L)$. Thus the parameter α reflected the speculative characteristics common to each group of markets; and because α may be determined from a single observation, that parameter could be used, with these data, to measure the average speculative characteristic of a single market. Used thus, its equation would be, $\alpha = S_S/(H_S + H_L)$; and under the condition for which I knew how to derive a useful speculative index, namely with $H_L = 0$, I had $\alpha = S_S/H_S = T - 1$. Hence it was evident that an expression for the speculative index could be written,

$$T = 1 + \frac{S_S}{H_S + H_L} = \frac{S_L + 2H_L}{H_S + H_L} \qquad (H_S \geqslant H_L). \tag{5}$$

The second expression for T in (5) above comes from converting the first one to an improper fraction and recognizing that $H_S + S_S = S_L + H_L$. Obviously, $T \geqslant 1$.

4. *Partial balancing of* H_S *and* H_L, *and of* S_S *and* S_L. It is useful to be able to compute the extent to which long hedging balances short hedging, thereby reducing the amount of net long speculation needed to carry the short hedging. Such balancing, which is accompanied also by partial balancing of long speculation by short speculation, has been illustrated in Chart 4 above.

To deal with the balancing concept, I use the notation of the following equations:

$$H_S = H^B + H_S^U, \quad H_L = H^B + H_L^U$$
$$S_S = S^B + S_S^U, \quad S_L = S^B + S_L^B \qquad (H_S \geqslant H_L)$$

where the superscripts indicate, respectively, the amounts of short and long hedging (speculation) that balance each other (B) and the remaining, unbalanced (U), portions of both short and long hedging (speculation). Then the *relative* amounts of balancing may be expressed in the form,

$$H^B = p_h\ H_S$$
$$S^B = p_s\ S_L \qquad (H_S \geqslant H_L),$$

where p_h and p_s represent *proportions* of short hedging and of long speculation, respectively, that are balanced by equal amounts of long hedging and short speculation, respectively.

It follows then (see Chart 4) that,

$$S_L - S^B = H_S - H^B \qquad (H_S \geqslant H_L),$$

and we may readily derive,

$$(6) \qquad 1 - p_s = (1 - p_h)\frac{H_S}{S_L} \qquad (H_S \geqslant H_L).$$

Note that the relation between p_s and p_h thus arrived at is general, within the limits stated parenthetically, and is reached without the aid of any assumption except that balancing *may* occur. We do not require that balancing occur, inasmuch as both p_s and p_h are left free to take zero values. The ranges of possible values of the two p's are given by,

$$0 \leqslant p_s \leqslant S_S/S_L;\ 0 \leqslant p_h \leqslant H_L/H_S \qquad (H_S \geqslant H_L).$$

Suppose, now, that we are ignorant of the empirical evidence concerning the general expression for T; let us see how much we can learn about the speculative index, T, from expression (6) and the basic definition,

$$T = S_L/H_S \qquad (H_L = 0).$$

In the special case of this definition, there is no long hedging to balance short hedging, hence $p_h = 0$, and expression (6) becomes, $1 - p_s = H_S/S_L = 1/T$. We see, therefore, that T must satisfy the general condition,

$$(7) \qquad (1 - p_s) = \frac{1}{T}.$$

It will become evident later, if it is not at this point, that expression (7) is entirely general, not restricted to the condition $H_S \geqslant H_L$.

Substituting the definition of p_s in expression (7) leads readily to

$$S^B = (1 - \frac{1}{T})\, S_L \qquad (H_S \geqslant H_L), \tag{8}$$

where the parenthetical qualification is required again because of its association with the definition of p_s.

Substituting expression (7) in expression (6), taking reciprocals of both sides, and writing an equivalent for $(1 - p_h)\, H_S$, gives

$$T = \frac{S_L}{H_S - H^B} = \frac{S_L}{H_S{}^U} \qquad (H_S \geqslant H_L). \tag{9}$$

If we now substitute in (9) the empirically derived expression, $T = (S_L + 2H_L)/(H_S + H_L)$, and rearrange terms, we have

$$H_S + H_L = (H_S - H^B)\,(1 + \frac{2H_L}{S_L}) = H_S - H^B + 2H_L \frac{H_S - H^B}{S_L} \qquad (H_S \geqslant H_L).$$

Then substituting from expression (9), rearranging and simplifying,

$$H^B = (\frac{2}{T} - 1)\, H_L \qquad (H_S \geqslant H_L). \tag{10}$$

Expressions (8) and (10) show that T, conceived as a speculative index to express the relation of amount of speculation to amount of hedging in relative terms, with unity representing the minimum amount of speculation capable of carrying the hedging, measures also the extent of direct balancing that occurs between long and short speculation and between long and short hedging. This appears more explicitly if the two expressions are written as

$$p_s = 1 - 1/T$$

$$p_h = 2/T - 1.$$

Here, as in expression (7), the relations are entirely general, not restricted to the condition, $H_S \geqslant H_L$.

To adapt the argument of this appendix to the condition $H_L > H_S$, all that is needed is to interchange subscripts, writing L for S and S for L in all expressions where either appears, and to make corresponding changes in all verbal references to the variables. The lower-case subscripts of r and p remain unchanged.

5. *List of useful formulas.* As an aid to computations, the more widely useful expressions are given below in the two forms in which they may need to be used. My experience suggests that in computing estimates from the published data it is wise to carry at least four significant figures, wherever possible, even though it be unlikely that more than two digits will be meaningful in the final estimates. The symbol ($\approx$) is used below to mean "estimated as"; hence the expressions, $r_h \approx H_S{}^*/H_S{}^*$ and $r_h{}' = H_L{}^*/H_S{}^*$ are equivalent. The final four pairs of ex-

pressions below, written explicitly in terms of known values of the variables, apply also to estimates—that is, with (′) added throughout.

When $H_S \geqslant H_L$	When $H_L \geqslant H_S$
$r_h = H_L/H_S \approx H_L^*/H_S^*$	$r_h = H_S/H_L \approx H_S^*/H_L^*$
$r_s = S_L/H_S \approx \dfrac{(S_L^* + N_L)}{(H_S^* + N_S)}$	$r_s = S_S/H_L \approx \dfrac{(S_S^* + N_S)}{(H_L^* + N_L)}$
$H_S' = (H_S^* + S_L^* + N_L)/(1 + r_s')$	$H_L' = (H_L^* + S_S^* + N_S)/(1 + r_s')$
$S_L' = r_s' H_S'$	$S_S = r_s' H_L'$
$H_L' = r_h' H_S'$	$H_S' = r_h' H_L'$
$S_S' = S_L' + H_L' - H_S'$	$S_L' = S_S' + H_S' - H_L'$
$M_L' = (S_L^* + H_L^* + M_L^* + N_L) - (S_L' + H_L') = M_S'$	$M_S' = (S_S^* + H_S^* + M_S^* + N_S) - (S_S' + H_S') = M_L'$
$T = 1 + \dfrac{S_S}{H_S + H_L} = \dfrac{2r_h + r_s}{1 + r_h}$	$T = 1 + \dfrac{S_L}{H_L + S_S} = \dfrac{2r_h + r_s}{1 = r_h}$
$H^B = (2/T - 1)H_L$	$H^B = (2/T - 1)H_S$
$H_S^U = H_S - H^B = S_L/T$	$H_L^U = H_L - H_B = S_S/T$
$H_L^U = H_L - H^B = 2(1 - 1/T)H_L$	$H_S^U = H_S - H^B = 2(1 - 1/T)H_S$

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AMERICAN WHEAT EXPORTS, POLICIES, AND PROSPECTS*

Of the many complexities in the world wheat situation today, none is less understood, more controversial, or more far-reaching in its economic effects than the multiform American wheat export program.

Rooted primarily in persisting government-stimulated overproduction of United States wheat, this diversified program has had a strong impact on the level and structure of the world's grain trade and prices, has kept American surplus wheat stocks from mounting to heights that would have brought outraged public demands for earlier price-production adjustments, and has had a marked influence on the economies and agricultural policies of many other countries.

A mere two decades ago any dreamer who had proposed such a "fantastic" postwar export program would have been laughed at and discredited. Two decades hence, even half a century hence, economic historians will perhaps still be debating the net economic effects of the "special" American agricultural exports of the past decade—effects on the subsequent level and development of freer multilateral international trade and on the domestic economies of competing exporting countries, recipient underdeveloped countries, and the United States itself.

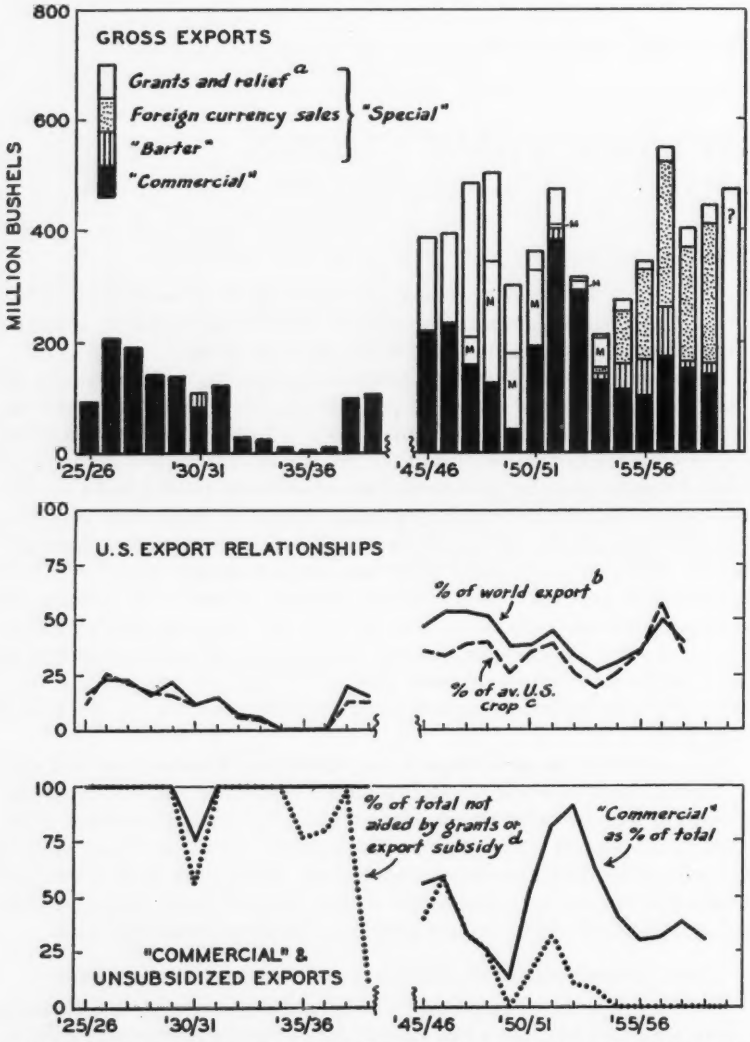
What appears to be needed most at the present time is a broad analyzed view of America's postwar wheat exports in historical perspective, and a clearer understanding of the relative importance, distinguishing features, and economic effects of the varied postwar export programs that have been partly or wholly directed and financed by the United States Government. The present study is designed to help meet this need, to consider the outlook for trade in the coming decade, and to highlight the basic changes needed in American wheat legislation.

SIZE, DESTINATIONS, AND CHARACTER OF POSTWAR WHEAT EXPORTS

The changing annual magnitudes and general character of American wheat exports are shown in Chart 1 (top section) for all peacetime years since 1925/26. Clearly, the postwar export levels have been notably high. Only twice since the end of World War II have these exports fallen below 300 million bushels, whereas over the entire interwar period that high level was reached or surpassed only once

* The writer is particularly indebted to V. P. Timoshenko for aid in preparing the discussion of Russian export prospects, and to Boris C. Swerling, M. K. Bennett, and Rosamond H. Peirce for helpful suggestions associated with critical reading of the entire manuscript. P. Stanley King and Patricia Theimer prepared the charts, and Catherine Whittemore the tables.

CHART 1.—United States "Commercial" and "Special" Exports of Wheat, with Comparisons, 1925–60*



* Based mainly on data reported in *Wheat Situation* (U.S. Dept. Agr.), April 1960 and earlier issues, with minor adjustment of some categories based on supplementary information regarding certain government-assisted exports. For description of "commercial" exports and the several categories of "special" exports, see accompanying text.

[a] Includes wheat purchased with unrestricted "Marshall Plan" funds, indicated by "M" designation on separated sections of the bars beginning 1947/48.

[b] U.S. net exports of wheat as a percentage of "world" net exports of the same year. "World" net exports represent the aggregate net exports of all net exporting countries, including the net trade of the Soviet Bloc with the rest of the world (but excluding intra-Bloc trade).

[c] U.S. net exports as a percentage of average U.S. wheat production of the three years centered in the year specified.

[d] Percentage of U.S. wheat exports sold at existing U.S. market prices.

—in 1920/21, when postwar relief shipments were at a peak. Moreover, in the past five years of active operations under the Agricultural Trade Development and Assistance Act of 1954 (83d Cong., Public Law 480 and later amendments), United States net exports of wheat have averaged more than 430 million bushels annually, over nine times the size of the average exports of the 1930's, almost three times the more representative peacetime average of 1922–31, and a little larger than the relief-inflated average of the first six years following World War II.

Such heavy exports have raised the United States to the rank of premier wheat exporter of the world—a rank attributable less to the competitive power of American wheat growers than to the competitive power of the American Treasury. Chart 1 (bottom section) shows that since 1954/55 not a single bushel of American wheat has been exported without the benefit of a direct export subsidy or grant (i.e., not a bushel was sold for export at prevailing American market prices).

So subsidized, United States wheat exports have continuously represented well over 25 per cent of "world"[1] exports during these years (usually 35–45 per cent), whereas the 25 per cent level was not reached even once in the final fifteen years of the interwar period (Chart 1, middle sction). No less significant is the fact that recent American exports have accounted for more than a fourth of the nation's domestic wheat crop, as contrasted with 10–15 per cent in most interwar years. This combination of evidence leaves no room for doubt that responsibility for the present heavy world wheat surplus lies within the United States, not outside,[2] and that the existing American surplus is much smaller than it would have been if the outside world had not continually absorbed much larger American exports in the postwar period than in any of the interwar years.

Pertinent also is the fact that the outside markets for American wheat exports have changed markedly since the interwar period. In particular, Europe has declined in relative importance as the chief market for American export wheat, while Asia has advanced, recently attaining top rank for the first time in history. No less noteworthy, however, is the fact that every wheat importing continent, including Europe, has taken more American wheat throughout the postwar period than it did earlier. Much of the increase recorded has been associated with concurrent rapid expansion of American "special" or "concessional" sales (*1*, p. 8). Even Europe, which is commonly regarded as the world's premier "commercial" market, has received a significant share of such "special" exports, a predominant share in the immediate postwar years. Equally or more important as a determinant of the increased European takings of American wheat, however, has been the concurrent decline in availability of wheat exports from the Soviet Bloc (*2*). Table 1 presents available data on the continental destinations of American exports by five-year periods.

Since only the figures for Europe and the Americas are reasonably comparable as between prewar and postwar years, the interesting division as between Asia and Africa is obscured in the "others" data. Clearly, the total amount of wheat

[1] As used throughout the present study, "world" exports refer to the total net exports of all net exporting countries, including the estimated net exports of the Soviet Bloc to the rest of the world (but excluding all trade within that Bloc).

[2] Further evidence, focused on world wheat developments, is presented in an earlier study by the writer (*3*, pp. 1–23).

TABLE 1.—UNITED STATES EXPORTS OF WHEAT AND FLOUR TO SPECIFIED CONTINENTAL AREAS, BY FIVE-YEAR PERIODS, 1925–40 AND 1945–59*

Five-year average[c]	To Europe		To North and South America[a]		To others[b]		Total	
	Mill. bu.	Per cent	Mill. bu.	Per cent	Mill. bu.	Per cent	Mill. bu.	Per cent
1925–30	89	52	19	11	62	37	170	100
1930–35	33	45	14	19	26	36	73	100
1935–40	37	59	9	14	17	27	63	100
1945–50	291	71	39	9	82	20	412	100
1950–55	161	49	50	15	118	36	329	100
1955–59	155	36	56	13	223	51	434	100

* Gross export data mainly from *Wheat Situation* (U.S. Dept. Agr.), August 1940 and later issues. Prewar and postwar data are not precisely comparable. Prewar figures include the grain equivalent of flour milled in bond from Canadian wheat, whereas postwar figures do not.

[a] Excluding Canada. Prewar data apply specifically to "Central and South America" (including Mexico), and are therefore slightly less inclusive than the postwar data.

[b] Primarily Asia, which in the three successive postwar periods accounted for 17, 31, and 44 per cent, respectively, of total American exports. Since 1956/57 "others" include all relief shipments made by private American charity organizations to undesignated destinations (of which Europe is perhaps the most important); by 1958/59 the undesignated total had climbed to 20 million bushels.

[c] For crop years beginning July.

received by those two continents combined increased sharply in the postwar period, though not in percentage terms until after P.L. 480 became operative. The great bulk of the wheat exported to "other countries" has always gone to Asia, and the impressive recent increase primarily represents grain sent to Japan, India, Pakistan, and other Asiatic countries. On the other hand, there is supplementary evidence to indicate that the modest American exports to Africa have grown fairly consistently, and thus far with less dependence on "concessional" terms than has been true for Asia as a whole.[3]

From an international standpoint, special interest attaches to the trade situation in 1956/57, when an all-time American export record of 550 million bushels was established. This was more wheat than any country ever exported before or since in a single year. It was roughly equal to half of the nation's average annual wheat production of the three preceding years and also to half of the 1956/57 exports of the entire "world" (Chart 1, middle section). Yet of the record American exports, only 175 million bushels, or less than a third, represented so-called "dollar sales" or "commercial" exports (Chart 1, top section). Moreover, even the "commercial" exports were all subsidized: every bushel was financially assisted by a *general* wheat export subsidy that averaged 79 cents per bushel for the crop year, the highest general export subsidy on record (6, p. 1). The remaining two-thirds of the peak exports were all subsidized at still higher per-bushel rates. They consisted primarily of record heavy "sales" under the American "barter" and "foreign currency" export programs (discussed below).

These heavily subsidized exports, especially the so-called "barter" exports, were strongly protested by governmental representatives of Canada, Australia,

[3] Additional interesting information about grain imports and consumption in Tropical Africa may be found in *4* and *5*.

and other friendly exporting countries. The basic claim was that they "unfairly" displaced sizable commercial exports that otherwise would have been made by the protesting countries, a claim broadly supported by the 1956/57 record of destinations of American wheat exports (7, pp. 29–31) and the abnormally high proportion of world exports represented by American wheat. Such protests disturbed American administrators, who presumably had not envisaged such marked interference with the world's "commercial" trade. Moreover, the protests could not reasonably be disregarded in view of accompanying implied threats of, and limited action toward, trade retaliation.

Under these circumstances, even the United States Congress, which had been continuously pressing for larger and larger surplus disposals, could not feel entirely happy about the year's record export total. As a result, the export "lesson" of 1956/57 was reflected in more considerate Congressional instructions in later (1958) P.L. 480 legislation and in related efforts by American administrators to pay more attention to the "normal trade patterns" of friendly competing exporting countries.

BASIC FEATURES OF "SPECIAL" VS. "COMMERCIAL" EXPORTS

In attempting to describe in a meaningful way the peculiarly diverse character of recent American agricultural exports, economists and government representatives have found it necessary to develop several new terms and to redefine old ones. As is usual in a period of changing terminology, such new and modified old words have not immediately been accepted, interpreted, and used in a uniform manner. This is true today of a dozen or more trade terms, employed in confusingly different ways to describe the postwar agricultural exports of the United States. Much of the confusion has resulted from failure to distinguish between contract price and net price, between marketing channels in exporting countries and importing countries, between source of financing and economic type of financing, between prices below domestic levels and prices below "world" export levels.

Here attention will be directed only to the trade categories represented in the accompanying diagram (Chart 2, p. 228), which indicates the general relationships that have existed among different types of American peacetime exports during 1925–60 as a whole. Chart 1 shows how the importance of four of the major categories has changed throughout the period.

As Chart 2 indicates, the nation's exports may be divided into two general classes: "special" (or "concessional") exports, on the one hand, and "commercial" (or "cash" or "dollar") exports on the other. Over the thirty years represented, the character of each of these major types of exports has changed so greatly that one might question whether it is really appropriate to use the same words for the two categories at the end of the period as at the beginning. In the present instance this is done in order to keep as close to current intergovernmental terminology as is possible without intolerable violation of basic economic concepts.

As defined in the 1959 International Wheat Agreement (IWA), *"special" exports* (frequently referred to as "concessional" in international discussions) include every export transaction that contains "features introduced by the Government of a country concerned which do not conform with usual commercial

practices" (*8*, p. 9). This vague definition is further clarified in the Agreement by the specific notation that "special" transactions include (a) sales on long-term credit resulting from government intervention, (b) sales under tied government loans, (c) sales for inconvertible currency, (d) barter transactions, (e) bilateral trading agreements, and (f) gifts or grants. All exports not classified as "special" under this definition are referred to as "commercial."

Except for small recent sales related to "tied loans" and to "long-term credits" by the Export-Import Bank and the Commodity Credit Corporation (inseparable from "commercial exports" in United States statistics), the distribution of American exports in Chart 1, top section, coincides well with the basic twofold IWA classification. This is indicated also by Chart 2, p. 228.

CHARACTERISTICS AND ECONOMIC EFFECTS OF FOUR MAJOR TYPES OF "SPECIAL" EXPORTS

An important point not made clear in the International Wheat Agreement itself, but often stressed in discussions in international agencies and in protests of foreign governments against "unfair American export competition," is that different types of American "special" exports have had very different effects on the volume and pattern of the world's wheat trade. This suggests that more attention needs to be given to the subclasses of "special" and "commercial" exports than to those categories themselves.

Basic to any meaningful differentiation between the individual subclasses of "special exports" are the "fair trade principles" set up by the many governments subscribing to the General Agreement on Tariffs and Trade (GATT) (*9*, pp. 15–17, 32–33; *10*, pp. 222–30) and to the "principles" and "guiding lines" of surplus disposal sponsored by the Food and Agriculture Organization (FAO) of the United Nations (*11*, pp. 80–86). These fundamental "principles" and "guiding lines" have been formally accepted by all leading countries of the non-Communist world, including the United States.

Among the most pertinent provisions thus specified, and broadly supported by the intergovernmental Wheat Utilization Committee (*12*, pp. 1–2), are (1) that governments "should seek to avoid the use of subsidies on the export of primary products (GATT)"; (2) that governments with excess stocks of agricultural products "should dispose of such products in an orderly manner so as to avoid any undue pressure resulting in sharp falls of prices on world markets" or "harmful interference with normal patterns of production and international trade"; (3) that in determining whether these conditions are fulfilled, exporting governments should give special attention to "the extent to which commodities supplied on concessional terms are likely to be absorbed by additional consumption" and "the extent to which the concessional sales threaten displacement of commercial sales of identical or related commodities"; and (4) that governments proposing to undertake large-scale sales on concessional terms "should, whenever practicable, consult with other countries interested in the possible effects of such transactions." In addition, the Wheat Utilization Committee agreed that priority should be given to efforts to expand *commercial* exports, a principle consistent with GATT ideals and presumably, though less clearly, in line with FAO "principles."

Judged by these criteria, which may collectively be referred to as *"the principles*

of consumption additionality and trade-pattern normality,"[4] the four major subcategories of American "special" wheat exports have differed markedly, ranging from "grants," which have recently resulted in heavy additional trade and consumption of the wheat received, to "multilateral barter," which has mainly substituted for commercial exports, has added little or nothing to world trade and consumption, and has materially disturbed "normal" trade patterns (during 1954–57). The particular characteristics and significance of each of these four major classes of "special" or "concessional" exports are described below.

"Grants"

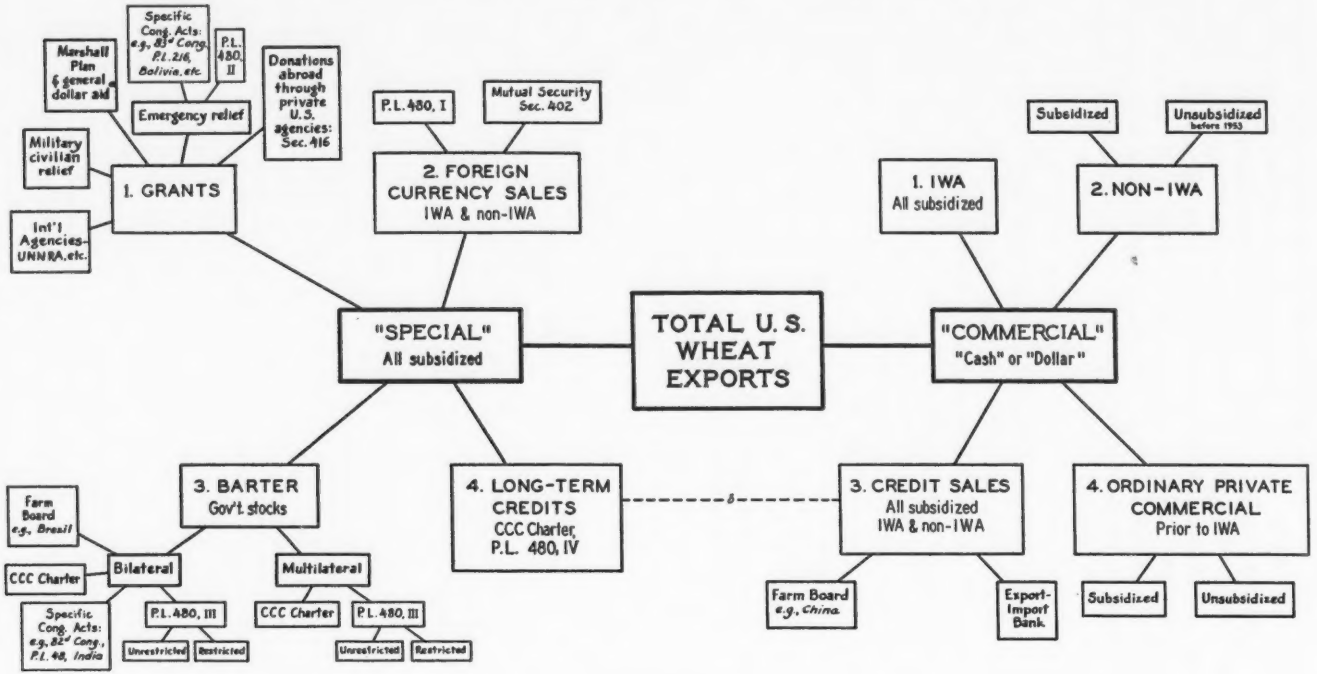
Chart 1 shows the great importance of American wheat grants in the years immediately following World War II, when the world wheat problem was one of shortage, not surplus. At first, most of the American wheat grants represented food relief distributed in war-devastated countries either by the United Nations Relief and Rehabilitation Administration (UNRRA) or by the American or other allied military forces. Soon, however, such food-relief grants were supplemented by grant-purchases of wheat requested by foreign government recipients of unrestricted Marshall Plan (Economic Cooperation Administration) funds. These semigrant purchases raised the American wheat grant total to a peak of 376 million bushels (75% of the nation's wheat exports) in 1948/49.

Although the Marshall Plan aid probably added only modestly to world wheat exports and consumption, it did nothing toward disturbing world wheat trade patterns. On the contrary, it even helped to finance small Canadian and other foreign wheat exports to Europe during the first year or two. The essentially unrestricted character of the general "Marshall Plan" grants, which were usable dollar funds not tied to specific commodities or groups of commodities,[5] was a notable differentiating feature. Wheat supplied by the United States under the European Recovery Program and through 1953/54 under the *general* Mutual Security Program (as distinct from "Section 550" and "Section 402" foreign currency "sales" described below) reflected the free choice of the individual Marshall Plan countries to spend essentially unrestricted aid dollars for wheat rather than for other materials or equipment. No one then worried about the fact that such

[4] The Wheat Utilization Committee would presumably not approve an interpretation of "normal trade patterns" that does not allow for the sharing of newly developed wheat markets. However, there has been an unfortunate lack of clarity about that term, which at times has been interpreted to mean the quantities exported in a specified earlier period to "traditional" markets. There has also been an unfortunate lack of emphasis on the normality of historical changes in "comparative costs," and an unfortunate lack of recognition of the impossibility of defining "normal trade patterns" in any precise quantitative way, particularly for individual years.

[5] Countries participating in the European Recovery Program (ERP) and later in the general Mutual Security Program could establish claims to such funds, however, only by proposing expenditure programs that could win the approval of responsible officials of the European Cooperation Administration, later the Mutual Security Administration. Moreover, the "counterpart funds" associated with sale of imported ERP-financed products were somewhat similar to the "foreign currency" funds associated with P.L. 480 Title I and "Section 402" sales. However, only about 5–10 per cent of the "counterpart funds" made available under the ERP and general Mutual Security Programs was assigned to the United States Government (usually used to pay current expenses mainly related to those particular programs); the remainder of the "counterpart funds" were made available for spending by the recipient foreign governments on diverse items approved by ECA officials as contributing to the "mutual security." Since July 1954 all wheat exports authorized under the Mutual Security Program have apparently been obtained under "Section 402," resulting in "Section 402 foreign-currency funds" owned by the U.S. and spendable on programs initiated by American officials.

CHART 2.—Generalized Relationships Among Specified Types of United States Wheat Exports, 1925–39 and 1945–60*



* For notes, see p. 229.

wheat "grants" largely substituted for commercial orders that otherwise would have been placed by European countries for their needed "staff of life." Saving of foreign exchange funds that otherwise would have been spent by the recipient countries for "commercial" wheat was entirely consistent with the underlying purposes of the two programs concerned; and, even more important, no burdensome wheat surpluses then existed to worry competing exporting countries.

Not until 1953/54 did American agricultural surplus disposal get specifically tied into any of the Economic Cooperation or Mutual Security legislation. Then the tie-in came in a separate section (at first, Section 550, later Section 402) which imposed associated obligations on the recipient countries of "paying" for the surplus products in their own currencies, thus shifting such wheat exports from the "grant" category to the "foreign currency sale" category.

Even before then (by 1951/52) the volume of American grant wheat had sharply declined as world food production recovered from its wartime dip and as the war-affected nations became better able to finance their own food imports. However, the United States Congress, troubled by persisting surpluses of wheat and other agricultural products after 1952/53, passed new legislation making enlarged grants possible for famine relief and other emergencies in countries in financial need. The new legislation (*13*), which has since been popularly and continuously referred to as "Public Law 480" (including subsequent amendments), also provided for other forms of concessional exports which proved to be much more important. It did not result in any notably large grants of wheat either under the broad authority provided for government-to-government famine and emergency grants (Title II) or under the provision for donations for distribution abroad by private American charity and relief organizations (Title III, Section 302).[6] Nevertheless, in each of the past two years these combined grants reached 30 million bushels, a sizable export volume.

In general, the entire postwar record of American wheat grants would appear to deserve the unanimous approval not only of humanitarians, but also of all competing exporting countries. Nor has such unanimous approval been lacking up to the present time. On the other hand, as the nature of America's wheat grants has shifted away from critically needed postwar food relief toward food distributions to pay workers on minor work-relief projects and toward larger donations for unsupervised distribution abroad by private American relief organizations, there has been some concern about where the American grant program may eventually be headed.

[6] This section of Title III is an amended version of Section 416 of the Agricultural Act of 1949, and is commonly referred to as "Section 416."

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[a] The indicated relationships apply to the 30-year period as a whole: in no single year were all of the specified programs operated simultaneously. The diagram was constructed by the writer on the basis of knowledge about the various government export programs of 1925–60, programs here classified mainly in line with definitions given in the International Wheat Agreement of 1959 (p. 225).

[c] Referred to in the text as "unrestricted grants." It is possible that some postwar purchases of wheat made with unrestricted foreign-aid dollars have not been recorded as "special" exports and therefore appear in the statistics as "commercial" or "cash" (residual) exports.

[b] The connecting line is designed to suggest that many of the credit sales reported in American statistics as part of "commercial" (residual) exports have had "special" or "concessional" features.

Foreign Currency Sales Under "Section 402" and P.L. 480

Over the past six years the most important single category of American "special" wheat exports has been that of foreign currency sales. This includes all so-called "sales" of American wheat for foreign domestic currencies, whether under P.L. 480 Title I or under Section 402 of successive Mutual Security Acts (previously Section 550). Quantitatively, the P.L. 480 sales have been much the larger, totaling 724 million bushels over the past five years, as compared with 253 million under Section 402.

Neither program has been open to all countries. Section 402 sales have been restricted to governments cooperating in the Mutual Security program, and P.L. 480 sales confined to friendly countries believed to have insufficient foreign exchange resources (especially dollar resources) to finance needed foodgrain imports. A number of countries have received wheat and other agricultural surpluses under both programs, the Section 402 purchases often counting as the "ordinary" purchases or IWA quota purchases some countries were required to make as the basis for establishing eligibility for "additional" P.L. 480 Title I wheat. The vague financial and historical trade criteria used to determine "eligibility" for P.L. 480 Title I sales were framed not by Congress but by the Administration, largely as a means of safeguarding commercial sales in line with Congressional instructions and international commitments.

Under both Section 402 and P.L. 480 limited "triangular sales" were arranged with a few additional industrialized countries willing to let the associated local currency proceeds be used to buy industrial items needed in one or more of the less developed, "eligible" countries (*14*, pp. 521–22). Under both programs, but particularly P.L. 480, administrative concepts of country "eligibility" and administrative use of "triangular sales" have changed markedly since P.L. 480 first became fully effective in 1955. So, too, has the practice of "tieing" commercial sales to P.L. 480 Agreements. In earlier years "tied in" sales of *American* wheat were common; but since 1958 commercial purchase requirements have usually been stated in global terms, without designation of any specific national source. These and other recent program changes have mainly reflected responses to international protests against earlier procedures and to revisions in Congressional instructions designed to give more protection to the trade interests of friendly competing exporting countries.

When Section 402 wheat exports were at their height in 1954–57 (*1*, p. 8; *15*, pp. 26–31), a sizable quantity went directly or through "triangular sales" to "commercial" importing countries in Western Europe and elsewhere, which otherwise would have purchased significantly more "commercial" wheat at existing "world" prices. In 1957/58, however, Section 402 wheat exports declined to only 31 million bushels, and in 1958/59 they dropped to 20 million—about the figure expected in the present year. At these lower levels there has been less displacement of world commercial trade; yet, even so, well over a third of the 1957/58 total and over half of the total for the following year went to Western Germany, a country fully capable of paying dollars for all desired grain imports.

Much of the recent decline in Section 402 sales came as a result of reduced Congressional provision for such exports, a reduction associated with recom-

mendations of the Administration and perhaps particularly with the opposition to "triangular sales" expressed by officials of the International Cooperation Administration (the administrative agency). In the spring of 1957, the Deputy Director for Operations (Dr. D. A. FitzGerald) informed members of the Senate Foreign Relations Committee that "triangular sales" tended "correspondingly to reduce regular commercial sales," involved "a disproportionately heavy administrative workload," and were "inconsistent with United States foreign trade policies" (*14*, p. 522).

More impressive, both in total and with respect to major destinations, were the Title I, P.L. 480 Agreement records. Pertinent data from these records are summarized in Table 2 for the entire six-year period and also for the two most recent crop years (half year in 1959/60).

TABLE 2.—APPROXIMATE QUANTITIES OF WHEAT INCLUDED UNDER TITLE I, P.L. 480 AGREEMENTS, SELECTED PERIODS, 1954–59*

(Million bushels, except as noted)

Country	July 1954–Dec. 1959			July 1958–June 1959		July 1959–Dec. 1959	
	Total	Annual average	Per cent	Total	Per cent	Total	Per cent
India	398	72	38	128	52	110	61
Yugoslavia	135	25	13	33	14	—	—
Brazil	89	16	9	—	—	—	—
Pakistan	76	14	7	33	14	—	—
UAR: Egypt	57	10	6	13	5	34	19
Turkey	54	10	5	—	—	11	6
Poland	34	6	3	8	3	—	—
Korea	33	6	3	12	5	—	—
Japan	31	6	3	—	—	—	—
Israel	23	4	2	7	3	—	—
Colombia	21[a]	4	2	—	—	13[a]	7
Total specified	951	173	91	234	96	168	93
Others	93[b]	17[b]	9[b]	11[c]	4[c]	13[d]	7[d]
Total	1,044	190	100	245	100	181	100

* U.S. 86th Cong., House, *Message from the President of the United States Transmitting the Eleventh Semiannual Report on Activities Carried on Under Public Law 480, 83d Cong., as Amended . . .* (House Document No. 335), Feb. 11, 1960, pp. 47, 48, 55. All P.L. 480 Agreements provide for commodity sales in terms of dollar value, not in units of weight or volume; consequently, the million bushel figures given in this Document are rough approximations.

[a] The reported figure of 13 million bushels for Colombia under agreements signed during July–December 1959 appears fantastically high for a single year; if no typographical error is involved, the basic agreement presumably provides for shipment over several years.

[b] Seventeen countries.

[c] Four countries.

[d] Two countries.

Of the billion-odd bushels of wheat "sold" under all Title I Agreements signed through December 1959, only eleven countries were scheduled to receive as much as 20 million bushels, individually, over the five-year period. Moreover, these few countries accounted for 91 per cent of the total; and scarcely more than half of the group, the six largest recipients, accounted for a full 77 per cent. Note-

worthy, too, is the fact that all of the major recipients rank as "underdeveloped" countries with limited foreign exchange resources.

The importance of this heavy concentration of sales to underdeveloped countries can hardly be exaggerated. It means, on the one hand, that wheat sales under P.L. 480 Title I have gone primarily to a few big "surplus disposal" unloading grounds, presumably adding materially to the total wheat imports of those countries, and perhaps adding only moderately less to their over-all wheat consumption. This reinforces the view that most Title I wheat sales were administratively planned so that they did not heavily displace "commercial" exports, particularly "commercial" exports of United States wheat. For this, American administrators deserve much credit.

Encouraging as this broad conclusion is, however, there are hidden exceptions and distortions that should be carefully noted. These include the *probabilities* that in some individual years (especially prior to September 1958): (1) India, Brazil, Japan, Egypt, Israel, and Poland would have purchased more "commercial" export wheat and/or other grain if they had not been able to benefit so heavily under the P.L. 480 program; (2) percentagewise, the displacement of "commercial" exports by P.L. 480 wheat has been even greater for a number of the 17 unlisted "other" countries, whose individual Title I wheat imports totaled less than 20 million bushels; (3) several of the five long-term P.L. 480 sales contracts resulted in somewhat more displacement of "commercial" exports than if carefully considered annual agreements had been negotiated for each of the years covered;[7] (4) part of the P.L. 480 wheat imported by Turkey freed additional Turkish wheat and barley for export, resulting in larger competitive exports of Turkish grain in Western Europe than otherwise would have been made over the six-year period; (5) part of the P.L. 480 wheat imported by Pakistan and Egypt freed increased quantities of rice for export from those two countries and/or cut commercial imports of wheat and other grains; and (6) in a number of recipient countries where wheat competes for land with cotton, increased reliance on P.L. 480 wheat imports meant heavier plantings, production, and exports of cotton than would have occurred in the absence of the concessional wheat imports.

How disturbing have such hidden trade effects been? At best, only a very rough, approximate answer to this question could ever be secured, and that only on the basis of a number of time-consuming country-by-country studies by experts familiar with the crop production, food and fiber consumption habits, and statistical pitfalls of the individual countries concerned. Yet even now there is enough fragmentary evidence to indicate that the adverse effects of P.L. 480 Title I sales in substituting for, and intensifying competitive trade in, other commodities is much more widespread, complicated, and substantial than is generally recognized.

A second noteworthy feature of the heavy concentration of P.L. 480 wheat sales by destinations is its intensification over time and the associated implications for the future of the program. In 1955/56, Title I Agreements involving

[7] Agreements involving wheat deliveries over a three-year period were signed with India and Brazil in 1956 and with Columbia in 1957; similar two-year Agreements were signed with Indonesia in 1956 and with Pakistan in 1958 (*26*, p. 16).

wheat sales were made with 18 nations; thereafter the number of foreign nations represented declined sharply, and the percentage of total wheat sales allocated to the six largest recipients markedly increased. Data for individual years are shown in the following tabulation (*16*, pp. 47, 51–55).

	1955/56	1956/57	1957/58	1958/59	July–Dec. 1959
No. of Title I Agreements involving wheat	18	14	15	11	6
Per cent of Title I wheat allocated to six largest recipients	73	95[a]	85	93	100
Total wheat covered by Title I Agreements (mill. bu.)	118	308[a]	141	245	181

[a] Includes large three-year Agreements with India and Brazil and a smaller two-year Agreement with Indonesia.

The extreme degree of concentration reflected in the figures for the first half of the current crop year has not been wholly maintained. Recent news reports suggest that nine countries have now shared significantly in the year's exports, yet the tendency toward great concentration remains clear.

These facts, reinforced by considerable supplementary evidence, support the view that administrators of the program probably cannot now count on putting substantial quantities of Title I wheat annually into more than about 10 friendly countries without threatening reduction and distortion of the world's commercial trade. Indeed, even this small number of "eligible" countries seems likely to decline in future years unless the existing "eligibility" rules are relaxed—a policy change that would threaten further encroachment on commercial trade, contrary to the interests of competing exporting countries and also to the long-term interests of the United States.

The past tendency has been for some of the earlier recipients of Title I wheat (e.g., Japan) to shift out of the ranks of concessional buyers into the group of commercial buyers as postwar economic recovery and development have proceeded. Others have recently developed their own grain production to the point where they no longer want to purchase much American wheat, even under the relatively attractive P.L. 480 terms. At present, Pakistan "plans" to increase foodgrain production by 21 per cent over the next five years (*30*), substantially raising per capita grain output despite a rapidly growing population—an increase that would presumably allow larger rice *exports*. And India, just fortified with a new P.L. 480 Title I contract calling for delivery over the next four years of almost 600 million bushels of wheat for current consumption and reserves, is hoping to raise domestic foodgrain production by 1966 to the point of self-sufficiency for "normal" crop seasons. Such "plans," even if not fully effective, are probably significant "straws in the wind."

On the other hand, part of the recent decline in the number of countries receiving Title I wheat is attributable not to improved conditions in former recipient countries, but to the fact that American administrators have been more careful in the past two years about protecting the commercial trade interests of competing wheat exporting countries. The associated legislative changes made in P.L. 480 in September 1958 deserve special attention (*17*). Until then Con-

gressional instructions had specified only that administrators of P.L. 480 Title I sales should "safeguard usual marketings *of the United States*" (italics added) and assure that such sales "not unduly disrupt world prices." Thus, Congress had previously appeared to seek only "additionality" of United States exports, without regard for the trade of friendly competitors unless or until heavy displacement of their export markets seemed to threaten "undue" disruption of world prices. However, after foreign government protests against American "unfair trade practices" rose to an alarming pitch in 1956/57 (pp. 224-25), Congress finally modified its earlier Title I instructions to provide, in addition, that future sales should not "unduly disrupt normal patterns of commercial trade with friendly countries" (*17*), a modification retained unchanged the following year.

Under these appropriately revised instructions, P.L. 480 Title I could be, and subsequently was, administered with more careful attention to anticipated world trade effects[8] and with more considerate open consultation with officials of competing exporting countries. Such intergovernmental consultation and cooperation was further promoted by the "Food for Peace Conference," to which President Eisenhower invited government representatives of the five leading wheat exporting countries in May 1959, a conference that resulted in the creation of a continuing Wheat Utilization Committee composed of officials of the same five governments.

These several moves in the direction of practical intergovernmental cooperation in dealing with wheat surplus disposals have brought American trading policies more closely into line with accepted international principles. Nevertheless, the huge quantities of wheat recently exported under P.L. 480 Title I, the continued pile-up of American wheat surpluses, and the intermittent introduction into Congress of new bills that provide for further sharp expansion of Title I sales under the guise of humanitarianism, leave the governments of competing exporting nations not only apprehensive about the future, but also interested in advance planning of possible retaliatory measures.

Common Misconceptions about P.L. 480 Title I Sales

Widespread confusion and misunderstanding exist in the United States about many aspects of the P.L. 480 Title I program. There are two key issues. First, what do the underdeveloped countries gain by receiving Title I wheat: Does it "save their foreign exchange"? Is it "just as good as dollars"? Does it go to "feed the hungry" or is it sold to the higher income classes? Is it used as "pay for workers on government projects"? Does it "fight inflation and speed economic development"? Or is it "just attractively cheap grain"? The second basic problem may appear simpler, but it, too, is the subject of controversy. What return

[8] Explaining the current administrative operation of P.L. 480 Title I, the President's Interagency Committee on Agricultural Surplus Disposal recently reported (*16*, p. 4): "Quantities of commodities in Title I agreements are determined only after a careful analysis of the possible effect of proposed programs on normal commercial marketings of the United States and other friendly countries. Factors considered relative to these commodities include historical trade, stocks, production, consumption, and trade import requirements. As a result of such analyses some proposals are rejected and others modified in order to avoid possible harmful effects on normal trade patterns."

does the United States Government get for such wheat: Of the billions of dollars appropriated for Title I agricultural exports, how much of the part spent for wheat comes back? What do American officials mean by saying that Title I wheat is sold "at prices comparable to those . . . for export sales for dollars" (*16*, p. 4)? Can the foreign currencies received be "used to buy goods and services we need"? Why do competing exporters call Title I wheat "cut-rate" exports?

No attempt will be made here to present complete answers to these questions. However, some clarification is necessary if the economic significance of the foreign currency sales is to be understood. Several of the major points will therefore be stated somewhat categorically, without full explanation.

1. *Title I wheat is not "just as good as dollars."* Nor does it "save foreign exchange" for the recipient countries, except to the extent that it displaces commercial imports of wheat or substitutable foods which these countries would otherwise finance. Since the Title I wheat program is supposed to be administered so that it does "not displace U.S. usual marketings" nor disrupt "normal patterns of commercial trade with friendly countries," the amount of foreign exchange saved should be small. This seems particularly likely for the past two years, when the bulk of the Title I wheat exports has gone to just a few "unloading grounds." In any case, Title I wheat is certainly not "as good as dollars." Dollars can be spent not only for food, but for factory equipment, agricultural machinery, and a host of other kinds of "production goods" purchasable only in the highly industrialized countries. Such imported capital goods would usually contribute considerably more than wheat to the promotion of economic development, and would usually be preferred to wheat by the governments of the underdeveloped countries.

2. *Title I wheat is rarely, if ever, used to "feed the hungry" and destitute* of the recipient countries. Indeed, insofar as serious mass hunger is concerned, free Title II wheat is obviously the more suitable relief instrument.[9] Moreover, the available records show that practically all Title I wheat is sold directly by the recipient governments through ordinary domestic commercial channels at whatever prices are charged for domestic and other imported wheat. In most of the poorer countries, this means that Title I wheat, priced at luxury food levels, can be purchased only by those who have enough money so that they need not be "hungry."

Whether Title I wheat tends to reduce market prices of the coarse grains customarily consumed by the poorer classes, reducing economic incentives for growers to maintain plantings of those grains and posing a future problem of providing cheap food for "the hungry," depends on a number of variable complex factors that make sound generalization impossible. Among such factors are the size and distribution of the Title I sales relative to the total market supplies, the degree of governmental intervention in the pricing system, the cropping

[9] Aside from such emergency food-shortage difficulties, there remains the crucial question as to how many *accessible* groups of poeple (not scattered individuals) are really suffering from serious undernourishment. On the numbers and locations of such reportedly "large" groups of people, trustworthy information is lacking (*18*, pp. 4–9). Moreover, the governments of some of those groups do not want to face the responsibility and expense of coping with the distribution of either Title I or Title II wheat.

patterns of the country, and the economic alternatives open to growers. Only to the extent that Title I wheat helps to generate increased earning power (through economic development and more productive employment) for individuals in need of additional food calories, is a firm base established for constructively "feeding the hungry" or for adding to, rather than displacing commercial sales that otherwise would have occurred. In some countries, under favorable conditions, these desirable developments have taken place; but the available evidence suggests that such favorable results have been of very limited magnitude up to the present time. Clearly, agricultural products are much less effective than general American dollar aid or American machinery or tools in promoting such development.

3. *Suggestions that Title I wheat should be used directly to pay workers on associated government projects have not been widely followed.* Nor do such schemes have much practical appeal. In essence, they represent a cumbersome, barter-type arrangement that reduces the right of the workers to decide how their earnings shall be allocated among semi-luxury wheat, cheaper foods, and other wanted items. Often the principal effect of such wheat-pay schemes is that the workers get a heavily discounted price for their wheat when they barter it with local merchants in order to obtain the particular combination of market products they prefer. And by such secondary barter the wheat enters normal consumption channels for sale to people who want and can afford it, thus competing with "commercial" wheat.

4. *Assertions that Title I wheat contributes markedly to economic development and inflation control in the recipient countries are also questionable as broad generalizations.* Under semi-ideal conditions of wise government planning of suitable development projects, concurrent timing of P.L. 480 wheat sales and related increased government expenditures, and appropriate channeling of P.L. 480 wheat (or substitutes) into the particular districts or regions in which increased development expenditures center, the amount of Title I wheat thus far received by several countries would presumably have been large enough to contribute modestly, though not heavily, to economic development and inflation control. However, such semi-ideal conditions have not commonly existed. Practically everywhere government economic planning has remained an uncertain, unskilled art. And unfortunately, too, the emphasis of American administrators of the P.L. 480 program has centered so heavily on disposal of agricultural surpluses that not enough thought, time, or money has been given to insuring that Title I loan funds have been tied to really promising development plans. Since April 1959 even less American attention appears to have been given to the constructive use of loan proceeds, as a result of program changes effected to "speed up the use of economic development funds" (*26*, p. 7).

Equally or more important, the general economic effects of Title I agreements are not yet ended. Since the recipient countries are expected to make amortization payments for many years against the associated development loans they have received, those payments must be counted as a continuing future claim on their national budgets and on the national economic resources required to meet resulting American expenditures of the local currency payments (factors tending to increase inflation and to retard future development). Only to the extent that

local currency depreciation occurs,[10] or that the governments of the recipient countries refuse to honor their loan obligations, or that loan repayments are voluntarily converted into American grants, can such future claims be wiped out. The hope, of course, is that the economic development originally generated by the loans will build resources capable of meeting the scheduled payments without strain; but the past century's record of repayments and defaults on private and public loans to developing countries (including some countries now fairly well developed) is not encouraging. Neither is the available evidence on development expenditure planning under the Title I loan funds.

5. *The "price" of Title I wheat is one of its most confusing features.* As American officials report, Title I wheat sales have typically been made at nominal prices comparable to those prevailing for "commercial" or "dollar" exports. However, the *effective net* prices of Title I wheat have been much lower. For each recipient the net price has been sharply reduced by the specific concessions written into the Title I, Public Law 480 Agreement concerned (see Table 3). The Agreements

TABLE 3.—USES OF FOREIGN CURRENCIES AS PROVIDED IN TITLE I, PUBLIC LAW 480 AGREEMENTS SIGNED JULY 1, 1954 THROUGH DECEMBER 31, 1959*

Specified uses	Million-dollar equivalent	Per cent of total
Total	4,159	100.0
U.S. uses (primarily)	(1,550)	(37.2)
For U.S. obligations	653	15.7
Other U.S. uses	615	14.7
Loans to private enterprise	282	6.8
Common defense	316	7.6
Foreign government uses	(2,293)	(55.2)
Grants for economic development	340	8.2
Loans for development and trade	1,953	47.0

* U.S. 86th Cong., House, *Message from the President of the United States Transmitting the Eleventh Semiannual Report on Activities Carried on Under Public Law 480, 83d Cong., as Amended . . .* (House Document No. 335) Feb. 11, 1960, p. 57. Amounts are in dollar equivalents at deposit rate of exchange.

negotiated for the various countries, and for the same country at various times, have differed markedly, both as to the commodities included and the specific concessions made. There have been no "standard" concessional terms. Nevertheless, such Agreements have customarily provided for the equivalent of price discounts in the form of (a) outright grants to the purchasing governments of some 5–15 per cent of the local funds scheduled to be paid for the wheat, (b)

[10] Prior to April 1959 most Title I, Public Law 480 loan agreements contained "a maintenance of value" clause, which was designed to maintain a constant dollar value of the foreign currencies due in payment of the loans. Thus, each borrowing country was required to repay enough units of domestic currency to equal the dollar value of the currency at the time the loan was made. If its currency depreciated, the country was obligated to pay proportionately more currency units. In April 1959, the Department of Agriculture dropped the "maintenance of value" clause, retroactive to all loan agreements signed after June 30, 1958. In repaying loans signed subsequent to that date the borrowing country is expected to repay only the number of foreign currency units it borrows, regardless of the value of the units (*26*, p. 7). It seems inevitable that the "maintenance of value" clauses in earlier agreements will later be dropped under a general ruling or eliminated through negotiation for countries whose currencies will have depreciated before the end of the loan period.

long-term (often 40-year) loans to those governments of another 45–50 per cent of the funds, with the loan terms specifying an interest-free period of several years and a low interest rate (recently 4 per cent) for later years, and (c) commitments by the United States Government to spend a substantial part of the remaining foreign currency for market development projects, trade fairs, international educational purposes and other services that represent additional expenditures over and above those customarily made.

Under this combination of sales terms, it seems absurd to try to maintain the myth that Title I sales are made at going "commercial" export prices. Yet this fiction is carried throughout much of the government accounting on P.L. 480 sales agreements. A mere hint of the huge additional costs borne by American taxpayers as a result of the special price concessions made on Title I sales may be obtained from Table 3. The figures are largely self-explanatory; but special attention may be called to the fact that only the funds earmarked for current "U.S. obligations" (15.7 per cent of the total) have been free for spending on goods and services that would ordinarily have been purchased by the United States Government. Even if there is no further currency depreciation in the Agreement countries and even if all of those countries should fulfill the repayment terms specified in their loan agreements (with the United States Government free to spend the repaid currencies as desired), the combination of grants, below-commercial interest rates, and initial no-interest loan period suggests an average discounted net export "price" of no more than $.95–$1.10 per bushel for such sales (basis central markets). Such prices compare with recent average "commercial" export prices of $1.45–$1.55 and with American producers' and consumers' prices of $2.00–$2.30 (see Chart 3, p. 247). Thus, the *minimal* discount from current subsidized "commercial" export prices can be put at about 30 per cent; and the actual average discount for all such sales may be expected to be much larger because of future currency depreciations and negotiated loan reductions.

Barter

Over the past decade, barter has ranked as the third most important "special" wheat export program of the United States. Prior to May 1957, this program was the most heavily criticized single method of American surplus disposal, because of its obvious displacement of "commercial" exports. Subsequent changes in the barter program, however, have reduced its scope and have gone a long way toward removing its most objectionable features so far as wheat specifically is concerned. For some other commodities (including coarse grains) improvement is less evident.

Although the authority of the Commodity Credit Corporation (CCC) to engage in barter transactions dates back to the Charter Act of 1948, this form of surplus disposal did not become really important until after P.L. 480 was passed in 1954. Thereafter, barter exports of wheat (all drawn from CCC stocks) rapidly expanded to a peak of 87 million bushels in 1956/57 (Chart 1). The sharp increase was associated in part with the provisions of P.L. 480 for the creation of a "supplemental stockpile" for absorption of CCC bartered materials not wanted for the "strategic stockpile" operated by the Office of Civilian and Defense Mobiliza-

tion.[11] It was associated, too, with the unusually favorable barter-program terms which the Department of Agriculture subsequently announced (see below).

No one appears to have anticipated that the barter program of 1954–57 would promote such a striking response, particularly by encouraging barter sales to Western European countries rated as leading "commercial" markets. As already noted, increasingly agitated protests were registered by competing exporting countries as barter sales mounted in 1956/57. Moreover, by then it was also clear that American "dollar" sales were being displaced. In April 1957, therefore, the existing barter program was suddenly suspended; and new terms, announced the following month (*19*) were designed to assure that subsequent operations would discourage exports that were not "additional" to ordinary commercial trade.

The revised program of May 1957 proved so contrastingly *un*attractive to barter contractors that wheat barter transactions (adversely affected also by an improved European harvest) dropped from the 87-million-bushel peak of 1956/57 to less than 10 million bushels in 1957/58. For other surplus agricultural commodities, the barter trade records also showed substantial declines.

Aroused by this sharp drop, the Congress attempted to write into the 1958 P.L. 480 Amendments (*17*) instructions to the Secretary of Agriculture to expand the barter program "to the maximum extent practicable" whenever he determined this to be in "the best interest of the United States," but the amendments also indicated that the Secretary was expected to take reasonable precautions to assure that barter transactions would not "unduly disrupt world prices of agricultural commodities or replace cash sales for dollars" or interfere with "normal patterns of commercial trade with respect to commodities covered by formal multilateral international marketing agreements to which the United States is a party" (the final safeguard applying specifically and only to wheat because that has been the only "surplus commodity" covered by such an agreement). Thus despite desire for heavier barter disposals of agricultural commodities, the Congress itself took special action in 1958 (extended for a further two-year period in 1959) to curtail wheat barter transactions likely to displace "normal" commercial sales either of the United States or of any friendly traditional wheat exporting country (primarily Canada, Australia, and, since 1959, Argentina).

Under these changing terms and conditions, the record of American wheat barter transactions shown in Table 4, p. 240, is by no means surprising.

The preceding historical review leaves unanswered three important questions: (1) what were the extremely favorable barter terms that resulted in the embarrassingly high wheat barter peak of 1956/57? (2) what chief administrative changes were made in subsequent program revisions? and (3) how do the subcategories of barter diagrammed in Chart 2, p. 228, tie in with the changing programs?

Before attempting to answer these basic questions, it is important to note

[11] Section 303 of P.L. 480 authorizes the Secretary of Agriculture to exchange agricultural commodities owned by the CCC for (a) strategic and other materials that are not produced in adequate supply in the United States and that entail less risk of deterioration or substantially lower storage costs, (b) materials or equipment required in connection with foreign economic and military aid programs, or (c) materials and equipment required for offshore construction programs.

TABLE 4.—BARTER EXPORTS OF UNITED STATES WHEAT, 1954–59*

July–June	Total barter exports		Barter exports to commercial areas[a]	
	Million bushels	Per cent of total exports	Million bushels	Per cent of total barter exports
1954/55	46	17	36	78
1955/56	67	19	56	84
1956/57	87	16	84	96
1957/58	10	2	6	65
1958/59	20	5	10	48

* Data from U.S. Dept. Agr., FAS, *The World Grain Trade* (FAS-M-33), April 1959, and U.S. Dept. Agr., FAS, *U.S. Wheat and Flour Exports under Government Programs for 1957–58 and 1958–59* (Mar. 16, 1960).

[a] Here arbitrarily defined as Western Europe and Japan.

that the American postwar commodity-barter program has continually operated in a unique manner. At no time has it closely resembled the "bilateral trade agreements" or "barter deals" of other countries recognized as leaders in international barter trade (e.g., Argentina). Historically, international barter has normally involved the direct exchange of domestic products between two countries, each represented at the negotiating table by its own government officials or semiofficial trading agency. The American Farm Board's barter exchange of wheat for Brazilian coffee in 1930/31 broadly corresponded to that pattern. By contrast, postwar American barter has usually represented a two-way exchange of products between the United States Department of Agriculture, on the one hand, and a private American contractor on the other.

Under the unique United States barter system, a private contractor, usually a large importer of metals or other stockpile materials, has submitted to the Department of Agriculture a proposed barter contract, based on the latest Presidential list of materials acceptable for barter exchange. With aid from other government agencies, that Department has then checked the proposed contract as to reasonableness of the implied prices and other contract terms (*20*, pp. 19–30). Many such proposed contracts have been turned down. Once such a contract has been approved, the contractor has usually arranged with a specialized commodity exporter to handle the agricultural export part of the deal (for a negotiated special "commission" or price discount), and the contractor himself has tried to buy at the lowest price possible the particular material(s) specified for delivery to the CCC. The agricultural product has then been handled by the exporter as if it were a regular commercial export; payment in dollars has been required, and the foreign importer of the product has often been wholly unaware of the original "barter" character of the transaction (*21*, p. 402). However, the special commission or price discount which the agricultural commodity exporter has received has permitted him to reduce the export price moderately below the going "world" commercial level in order to make an additional doubtful sale.

Prior to May 1957, the terms written into such barter contracts were strikingly generous. No restrictions were then imposed by the Department of Agriculture as to countries of origin or destination, except that the material could not be of United States origin, and the foreign countries concerned had to be "friendly."

Then too, even more important, the barter contractor was usually permitted to take immediate delivery of the CCC agricultural commodity (for which he received prompt payment from the associated commodity exporter) and to delay delivery of the promised material for as long as 2 to 4 years, a period during which he could use, interest free, the money he had already received from sale of the surplus agricultural commodity. The associated barter profits were, therefore, usually large. Such transactions are represented in Chart 2 as *"unrestricted multilateral barter,"* since few restrictions existed and the bartered material could come from a nation other than that to which the farm product moved.

Under the revised barter program introduced in May 1957, the Department did not disturb the multilateral feature of the earlier program, but imposed the requirement that a written "certificate of additionality" be presented. This, in itself, was a considerable handicap, since many officials of importing countries did not want to sign "certificates" stating that the commodities to be imported would represent "net additions" to ordinary imports from the United States. Yet this problem might have been managed in time, if the barter contractors had not had a more important reason for disliking the revised barter system. Their major objection was based on the inclusion of an interest charge in the barter contracts, a charge to cover the use of related funds during the period between the receipt of the CCC agricultural products and the delivery of the stockpile materials. This made barter deals much less attractive.

Another substantial administrative change was made in the barter program in November 1958 (22). The novel, complex system then instituted (still in operation) provided for a four-fold country-commodity classification to serve as the basis for "acceptable" barter contracts. Each of the specified individual countries, classified on the basis of their "current economic and financial conditions and historical dollar marketings of U.S. agricultural commodities" were ranked A, B, C, or X for each designated surplus agricultural commodity. Many countries were rated A for one commodity, and B or C for another, the A category representing a higher potential as a "dollar" or American "commercial" market than B, and B a higher market potential than C. The X category was introduced later, when the need became clear for a super-A category for a few countries; the X ranking thus indicates the very highest dollar-market potential. This system made it possible for the Department of Agriculture to prevent barter exports to X countries, to "screen" barter contracts involving exports to A countries (to insure "additional" sales), and to obtain pertinent information about the relationship of imported materials to barter exports to B countries.[12]

In Chart 2 such A country and B country contracts typically classify as *"restricted multilateral barter"* and *"restricted bilateral barter."* Only for C countries have barter contractors been permitted to continue to negotiate the kind

[12] For A and B countries (but not for C) every barter contract has had to name in advance all of the countries and commodities involved in the prospective transaction; and every "multilateral" contract has had to present evidence to show that importation of the material to be delivered to the CCC would be tied directly to the associated agricultural export. Furthermore, the Department of Agriculture has clearly indicated that "bilateral" contracts are to be preferred to "multilateral" for A and B countries, and that all proposed contracts for A countries are carefully screened to insure adequate safeguards for "usual marketings of the United States," "world price levels," and ordinary "commercial" trade.

of "unrestricted multilateral" contracts previously employed; and under the revised program a new name, "open-end," has been officially used to describe those contracts.

What have been the economic effects of the American barter system? This question is too big to try to answer here. An adequate answer would cover consideration of many national and international economic and political factors only indirectly related to wheat. Such factors would include: (1) the heavy, hidden costs of the swollen supplemental stockpile to American taxpayers; (2) the sharp disturbances registered on world markets whenever rumors circulate of planned sales of any part of the stockpiled materials; (3) the probability that the temporarily overstimulated demand for certain stockpile materials has raised, in producing countries, false expectations of a continued inflated export demand and continued high prices, thus postponing needed adjustments; (4) the general inefficiency and additional costs associated with such barter trade; and (5) the tendency of the system to proliferate government marketing and trade controls, both in this country and abroad.

More directly, the one outstanding economic effect of the American barter system has been its persisting tendency to displace *"commercial"* sales of agricultural products, not only the commercial sales of competing exporting countries, but also, in lesser degree, American "dollar" sales. Prior to May 1957, typical "special commissions" on barter grain paid to grain export firms are reported to have ranged between 2 and 5 per cent of the price and to have been mainly passed on to importers abroad after the barter program was well established (*23*, pp. 13 ff; *20*, p. 18). Since May 1957, the "special commissions" have reportedly been considerably higher (8–11 per cent), partly because the export firms have necessarily incurred higher costs in locating markets where "additional" United States grain could be placed, and partly because they have found it necessary to offer larger price discounts (lower net prices) to attract such "additional" customers. For wheat, the indicated percentage commissions apparently resulted in export price discounts of something like 2–7 cents per bushel before May 1957 and perhaps as much as 8–15 cents per bushel since that time (the bigger discounts supposedly applying to C countries under the current classification).

In foreign exporting countries, such American barter competition has generated marked cynicism and bitterness about American trading methods and the lofty "multilateral trade promotion" ideals professed by American officials. Moreover, it has raised great fears—probably excessive fears—about possible future "cut-throat competition" by the United States Treasury.

So far as wheat alone is concerned, the changes in the barter program effected since 1957 (in consultation with Canadian officials) have reduced the annual outflow of American barter wheat to some 20 million bushels, and have channeled a larger portion of the total away from the commercial markets most heavily contested by Canada. Nevertheless, probably something like half of the barter-wheat shipments of the past two years have gone to markets that presumably would have absorbed an equivalent quantity of the world's "commercial" wheat either at existing commercial export prices or at prices only moderately lower. One may well question whether the remaining 10 million bushels of annual wheat disposals are worth the related costs of the barter program, with all of the

irritations it engenders. As a recent American-Canadian publication commented (*24*, p. 14):

> it is difficult to envisage any really large role for the barter program that would be consistent with two fundamental principles of present U.S. policy: (1) that commercial wheat markets must be maintained and enlarged and surplus disposal eventually eliminated; and (2) that the commercial wheat markets of Canada and other friendly foreign wheat-exporting nations must not be undermined by surplus disposal techniques which would rekindle justifiable irritations and complaints.

Long-Term Credits and Supply Contracts

Under the CCC Charter Act, the United States Department of Agriculture has long had authority to arrange long-term dollar credits at discretionary interest rates on export sales of CCC-owned stocks. However, only minor use has ever been made of such credits. Nor did the strengthening and extension of this authority in the form of a 1959 amendment to P.L. 480 new Title IV (*25*), result in any additional use of long-term credits through December 1959.

In the postwar period, deferred payment credits on grains appear not to have been offered by the CCC until after the surplus stocks situation had become acute and the Congress had responded by passing P.L. 480. This meant that any foreign nation in financial difficulties that could obtain grain under the more liberal foreign currency provisinos of P.L. 480 Title I, would have been foolish to agree to purchase under a dollar-credit arrangement. Moreover, the credit terms specified by the CCC were not sufficiently attractive to encourage other buyers to make much use of the deferred payment program: the interest rate was only a little below existing commercial bank rates; an irrevocable guarantee of an American bank was required as security; and the credit period was limited to three years (*23*).

In short, the particular dollar credits offered by the CCC in recent years have been essentially semicommercial, more or less comparable to Export-Import Bank credits. Indeed, the Department of Agriculture does not report such credit exports under itemized "special" programs, but includes them with the residual "dollar" or "commercial" exports, from which they are inseparable.

Although the CCC had financed a few minor sales by three-year dollar credits prior to May 1959, it had not made any delivery commitments for more than a year in advance except in connection with five two-year and three-year sales under P.L. 480 Title I (*26*, p. 16). This is noteworthy, mainly because long-term delivery commitments were strongly supported by a number of Congressional leaders who sponsored even more generous long-term credits than are now authorized under P.L. 480 Title IV.

Although still unutilized, the provisions of Title IV warrant brief consideration. Under that Title, the President is authorized to make long-term credit sales of surplus agricultural commodities to friendly (developing) countries. The sales agreements commit the United States to deliver stated quantities of specified commodities annually for periods not to exceed 10 years, provided the commodities are in surplus at the time the delivery is to be made. Payment of prin-

cipal and interest is to be made in dollars over periods not to exceed 20 years, at a rate of interest to be determined by the Secretary of Agriculture, but not higher than the cost of funds to the United States Treasury (25). In operating under the Title, the Secretary is instructed to maximize sales of agricultural commodities, taking precautions to avoid replacing sales for cash dollars and endeavoring "to reach agreement with other exporting countries . . . for their participation in the supply and assistance program . . . on a proportionate and equitable basis."

It seems clear that extension of 20-year dollar credits at an interest rate no higher than that paid for funds borrowed by the United States Treasury would itself be tantamount to a price discount. Moreover, if (as seems appropriate) such long-term credits, with associated supply commitments, should be extended only to nations that appear likely to be strong enough financially to pay back the dollar loans, this would mean making concessional sales for up to 10 years in advance to the very countries that appear most promising as potential "commercial" customers. Thus, there would be a strong possibility of displacement of future "commercial" sales that otherwise would be made by the United States and/or by competing exporting countries. The future financial positions of promising developing countries can not be foreseen a decade, or even five years, ahead. Neither can the supply needs of such countries. To attempt to decide in 1960 what countries should be declared eligible for "concessional" sales of wheat, and in what quantities, even in 1962 would be a hazardous undertaking for a Secretary of Agriculture instructed (1) to safeguard "cash" sales of the United States, and (2) to cooperate with other exporting members of the International Wheat Council and Wheat Utilization Committee in expanding the world's "commercial" trade in wheat. But to ask the Secretary to make such a determination 5 to 10 years in advance clearly poses a most serious threat to "commercial" trade.

Fortunately, the responsible officials of most "eligible" importing countries would probably hesitate to enter into such long-term dollar loan agreements, even at the lowest conceivable interest rate. Most importing countries faced with variable domestic crops, as virtually all importing countries are, do not want to import the same quantity of wheat annually even over a three-year period, thus incurring additional storage costs in any year in which the imported supply would be excessive. Nor are many developing countries ready to assume that their own agricultural expansion programs may not take care of their national needs several years hence—if not directly through production of the desired amounts of foodgrain, at least indirectly through exportation of other agricultural products. Finally, it would be foolish for the government of any importing country to agree in advance to buy such *American* dollar wheat during each of several ensuing years, when Argentine or Australian or even Russian wheat might then be offered on more attractive terms.

Under these varied handicaps, long-term dollar credits with associated long-term supply contracts seem unlikely to become substantial at any time in the future, at least so long as "maintenance of dollar value" is taken seriously and so long as emphasis is put on preservation and expansion of the world's "commercial" trade.

"COMMERCIAL" EXPORTS AND PRICE POLICIES

The second major category of United States wheat exports shown in Chart 2 is that of "commercial" exports, more commonly referred to by American officials as "cash" or "dollar" exports. Whether compared with ordinary dictionary definitions or with more specialized economic terminology, all three terms are quite inappropriate for American exports of the postwar period. On the other hand, the changing characteristics of American "commercial" exports have been so peculiar, so different from anything previously encountered in the world's trading system, that no properly distinguishing common term can readily be found to describe them. To throw more light on their peculiarities, and to point up the importance of government pricing and "special" selling in determining their general volume, is the purpose of the present section.

Changing Characteristics of Postwar "Commercial" Exports

In prewar years no one would have thought it necessary to describe the characteristics of "commercial exports" or even to use the term "commercial" as a modifying adjective. Except for a couple of Farm Board transactions, *all* prewar American exports were commercial, in an easily understood, old-fashioned sense. Until 1938/39 private American grain traders did not even have to concern themselves with any general export subsidy. They vigorously pushed export sales almost solely on the basis of "spot" and "futures" market prices tied into a world price structure that was continually responding to indicated changes in the international demand-supply situation. In 1938/39 government pricing decisions in the form of a general export subsidy became important for the first time. But even then there were no "special" exports, and the "commercial" exports of that year were tied directly to the world market structure with the general subsidy as a buffer, a buffer that further lowered the "world" export price (*27*).

At the end of World War II there was no longer any integrated free or semi-free "world" market. But otherwise, American "commercial" exports still retained much of their simple prewar character. There was no complicated set of differentially priced "special" exports; nor were American "commercial" export prices set at Washington. During the first four postwar years large government grants of American wheat were made available for civilian relief in war-devastated areas, and from 1947/48 additional large amounts of American wheat were purchased with virtually unrestricted Marshall Plan funds appropriated as grants by the Congress to aid European economic recovery. The rest of the wheat exports of 1945–49, however, were also heavy: all of these were true commercial exports tied directly to the free Chicago wheat market and priced to paying importing countries at the same high, world-shortage level that American consumers were paying and American producers receiving.[13] Interestingly, also, the same high prices applied to the programmed orders placed under the European Recovery Program (Marshall Plan).

American "commercial" exports reached an all-time peak during the Korean War period; and as a percentage of total American wheat exports, they rose to a postwar high of 80–90 per cent in 1951–53 (Chart 1). By that time, however, the

[13] Wartime ceiling prices were removed in 1946.

American wheat export structure had become more complicated. Participation in the International Wheat Agreement (IWA) of 1949 had necessitated the establishment of an IWA subsidy by the United States Government in order to bridge the gap between the maximum IWA price for which signatory importers were eligible (on specified quotas) and the much higher American market prices which were already being held up by the nation's price-support program. Chart 3 shows the contrasting prices available after August 1949 to IWA importers, on the one hand, and to American consumers, American producers, and foreign importers of non-IWA wheat on the other hand. From December 8, 1953, all American wheat exports were eligible for the same general subsidy: as of that date, GR 261 became effective, making non-IWA exports eligible for a subsidy equivalent to that available on exports under the IWA.

Although all IWA exports from the United States were clearly subsidized at 50–75 cents a bushel during the decade beginning August 1949 (and all non-IWA exports also after December 1953), those subsidized exports are all classified as "commercial" under current international terminology. This means that the IWA subsidy program and its "equivalent" for non-IWA wheat are not counted as "special programs," resulting in "special" or "concessionary" exports, but rather as nonconcessionary pricing procedures that permit overpriced American wheat to flow to export at existing "world" prices.

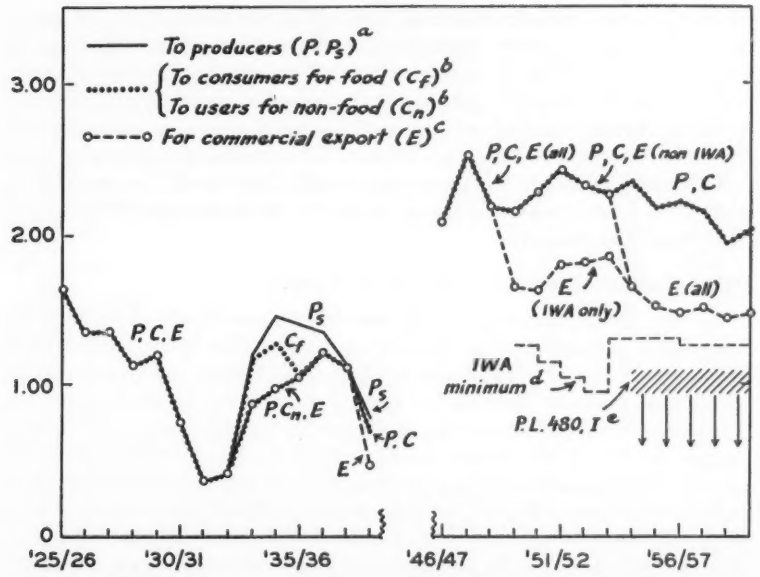
So long as other exporting countries were not troubled with surplus stocks and the American IWA subsidy program merely permitted American wheat to be priced for export to IWA importers (and such importers only) at the internationally negotiated *maximum* IWA price, there was good reason to regard that subsidy program as part of a "regular" international plan, not as an objectionable national competitive device. But when the same program was extended, in a year of world wheat surpluses, as a means of permitting American government officials to set export prices of both IWA and non-IWA wheat at whatever lower levels they chose to regard as "properly competitive," international cooperation was no longer the dominant feature, and competing exporting countries could reasonably protest the threatening economic nature of the program. This aspect of American "commercial" exports is discussed further below (pricing section).

Since 1954 the mushrooming of "special" exports under P.L. 480 has increased the need for a "commercial" export category of greater economic significance. United States Department of Agriculture wheat export statistics, which treat "cash" or "dollar" exports simply as a "residual" item after deduction of named "special" programs, only partially meet this need. Attention has already been called to the inclusion of CCC long-term credits and Export-Import Bank credits in the residual "dollar" or "commercial" export category, despite their semi-commercial and occasional concessionary features. Other minor distortions also exist in the officially classified export statistics.

For Chart I several adjustments have been made in the official export category figures to make them somewhat more consistent and meaningful. Nevertheless, some of the categories shown still include some inseparable items that are more properly classifiable elsewhere. And since the "commercial" export group is reported as a residual (both nationally and internationally), it is the least adequately differentiated of the several categories charted.

CHART 3.—Price of No. 2 Hard Winter Wheat (Kansas City) to Producers, to Consumers, and for Export, 1925–60*

(U.S. dollars per bushel)



* The basic Kansas City market prices (representative of the prices paid by consumers and received by producers in most years) are unweighted July–June averages of monthly weighted average prices taken from various issues of *Wheat Situation* (U.S. Dept. Agr.), and *Kansas City Grain Market Review*. For 1959/60 the figures shown are for July–March.

[a] Producer prices (P) are roughly the same as the basic market prices except in years when "cooperating" producers received an additional direct payment for reducing wheat acreage or planting soil-conserving crops on wheat land; for such years (1933/34–1935/36 and 1938/39) the P_s prices shown in the chart represent the crop-year market price plus the average per bushel subsidy received by "cooperating" producers in the same year. Noncooperating producers received the unsubsidized (P) market price. Recent Soil Bank payments should perhaps also be taken into account, though they are not quite as directly price supplements as the earlier payments.

[b] Consumer prices for nonfood uses (C_n) are the same as the market prices throughout the entire period. Consumer prices for food (C_f) are also the same except during 1934/35–1936/37, when millers paid the market price plus a processing tax on all wheat milled for domestic consumption.

[c] "Commercial" export prices (E) refer to the basic prices paid for wheat *grain* by "paying" countries, such as the United Kingdom. During the four years beginning 1949/50 export subsidies were available to these and other countries on quota wheat exported under the International Wheat Agreement (IWA); but all other "commercial" exports of wheat grain were then priced at current market levels. Since 1953/54 all IWA and non-IWA wheat has been subsidized to commercial importers at the same subsidy rates. "Commercial" export prices for wheat exported in the form of *flour* have been lower than the E prices shown for wheat *grain* in all years since 1949/50.

[d] IWA minimum price, basis No. 2 Hard Winter, Kansas City, is here roughly approximated by deducting 25 cents per bushel from the internationally agreed minimum, basis No. 1 Manitoba, Fort William. In the past few years a differential of 18–28 cents has been reflected in the "commercial" export prices of these two wheats.

[e] Very rough approximations of the net discounted present value to the U.S. of past and anticipated future foreign currency payments on P.L. 480 Title I wheat sales. These "prices" are based on the nominal market price minus the calculated per-bushel value of the foreign currencies returned to recipient countries (1) as grants for economic development and multilateral trade and (2) as payment for "common-defense" projects, and also minus the discounted present value of the interest saved (per bushel) under the generous P.L. 480 "economic development loans." The "prices" thus calculated carry the unrealistic implication that all loans will be repaid in undepreciated foreign currencies fully spendable for U.S. Government needs and that all other reported current uses of the foreign currencies are of equivalent dollar value to the United States. The downward arrows indicate that this is unlikely to be true.

At the international level, an additional classification difficulty arises which defies satisfactory solution. It is quite possible for a particular international transaction simultaneously to represent a "special" export from the standpoint of the exporting country and a "commercial" import from the standpoint of the importing country. For example, unrestricted multilateral barter exports from the United States should clearly classify as "special" exports, but if, as has often happened, a European importer purchases such products through ordinary channels, paying in American dollars on commercial terms, the same transaction should clearly be counted a "commercial" import. This means, of course, that world "commercial" imports may in some years exceed related world "commercial" exports, an awkward double-accounting element for the International Wheat Council to record and consider.

Volume and Destinations of "Commercial" Exports

For the fifteen postwar years and even for the past decade alone, American "commercial" exports of wheat have averaged higher than in any comparable interwar period, as is clearly apparent in Chart 1. Such long-time averages are less meaningful, however, than shorter ones. For example, the chart shows that American wheat exports practically disappeared in the mid-1930's, when extended drought reinforced the adverse trade effects of the Great Depression. Consequently, the commonly cited 1934–39 average cannot be employed as a useful prewar reference base for United States wheat exports. Much more suitable for that purpose is the 1925–30 average. And it is particularly interesting to note that the "commercial" exports of the past five or six years have closely approximated, in size, the "commercial" exports (which were also the total exports) of that earlier period.

Indeed, in view of the much higher recent level of the world's wheat trade and of the much larger postwar American crops, the nation's "commercial" exports of 1953–59 appear surpisingly small. The answer lies partly in the relatively high c.i.f. import prices foreign importing countries have recently had to pay for American "dollar" wheat, and partly in the fact that a substantial but indeterminte part of the huge "special" American exports of those years detracted from world (including American) "commercial" exports. As noted earlier, this was most conspicuously true with respect to the heavy multilateral barter exports and the Section 402 foreign currency sales of 1954–57, both directed in large part toward "paying" countries. But it was true also, though in lesser degree, of the P.L. 480 Title I sales, which some American officials have been tempted to claim were all "additional" exports.

Table 5 shows the destinations of American "commercial" wheat exports of the past five years. For the period as a whole the European continent retained its prewar supremacy, though the lead over Asia had sharply contracted. More important, the rank relationship was reversed before the end of the period, as Japan rose to supplant the United Kingdom as the premier importer of American "commercial" wheat. As compared with prewar years, the "commercial" takings of a number of smaller Asiatic and Latin American countries were also significantly larger in 1954–59, but little trend change is evident for those countries within the latter period.

TABLE 5.—DESTINATIONS OF UNITED STATES "COMMERCIAL" EXPORTS, 1954–59*

(Million bushels)

Continent and country	1954–59 average	1954/55	1955/56	1956/57	1957/58	1958/59
Europe	58	60	38	88	50	52
United Kingdom	20	22	7	22	23	26
Netherlands	12	12	14	13	8	12
West Germany	11	11	6	22	10	5
Belgium-Lux.	5	5	3	8	2	5
Italy	2	1	1	8	—[a]	—[a]
Switzerland	2	1	—[a]	7	1	1
Others	6	8	7	8	6	3
Asia	40	16	27	43	65	50
Japan	22	3	13	21	41	32
Philippines	7	6	5	6	9	8
Others	11	7	9	16	15	10
North America	18	15	17	19	19	20
Cuba	7	5	6	8	7	8
Others	11	10	11	11	12	12
South America	14	17	10	12	17	14
Venezuela	6	4	5	6	7	6
Brazil	4	9	2	—	5	3
Others	4	4	3	6	5	5
Africa	9	8	13	12	7	6
Total	139	116	105	174	158	142

* Data from U.S. Dept. Agr., FAS, *The World Grain Trade* (FAS-M-53), April 1959, and U.S. Dept. Agr., FAS, *U.S. Wheat and Flour Exports under Government Programs for 1957–58 and 1958–59* (Mar. 16, 1960, mimeo.).

[a] Less than 500,000 bushels.

The sharp rise of Japan as a consumer of American "commercial" wheat was due on the one hand to rapid postwar economic recovery and expanding exports, and on the other hand to the advancing level of living of the rapidly growing Japanese urban population. The shift of that country from a 1954–57 position as major recipient of "special" program wheat to top rank as a commercial importer holds many implications for future American policy decisions regarding "special" export programs, foreign economic aid, and the encouragement of freer multilateral world trade. It sharply points up the threat to future commercial trade of *long-term* sales arrangements that call for specified annual deliveries of American wheat on "special" concessionary terms over a period of several years. And it clearly indicates the desirability of promoting well planned economic development and higher export earnings of viable underdeveloped countries.

Subsidization and Pricing of "Commercial" Exports

The volume of "commercial" wheat exports shipped out annually by the United States is now determined not by economic forces reflected in the prices registered on interrelated export-import markets, but by subsidy and pricing de-

cisions taken by small groups of government officials in Washington, Ottawa, Canberra, Buenos Aires, Paris, and leading importing countries. Although such decisions have not been wholly unrelated to persisting economic forces (as some commentators imply), opposing short-run political influences have obviously interfered with and postponed appropriate administrative decisions and actions. Of the leading wheat exporters, however, only the United States and France have persistently resorted to export subsidization of wheat, and in most years French exports have been too small to be seriously competitive.

Starting each year with knowledge of (1) the volume, sources, destinations, and sales prices of the world's "commercial" wheat exports of preceding years and (2) the expected size and distribution of new-season grain crops and carryovers, responsible American administrators have continuously faced the crucial question as to whether they should or should not change the existing export subsidy rates for wheat. Since the underlying desire has been to expand American wheat exports, the obvious question has been whether the basic "IWA subsidy" (applicable to all of the nation's wheat exports since November 1953) should not be raised, thus correspondingly reducing the associated "commercial" export price and presumably widening American export outlets.

In actual fact, the record of United States "commercial" export prices shown in Chart 3 (p. 247) indicates that American administrators have kept the subsidized "commercial" export price of No. 2 Hard Winter wheat at an almost constant level since 1955/56. Moreover, the recent basic export prices appear low only as compared with the early postwar "world grain shortage" period and with the unsubsidized market prices charged for a small fraction of American exports (those outside the IWA) during 1949–54, when temporary shortage of good milling wheat, inflationary influences, and spreading war threats were prominent.

What price and trade policies have presumably been responsible for this record of administered export prices and for the associated 140-million-bushel average commercial wheat exports since 1954/55? Obviously, the International Wheat Agreement minimum price is one factor that would have to be considered. Thus far, however, that minimum has presumably not been an effective deterrent to further moderate price reductions of, say, 20–25 cents per bushel. Under the last two Agreements, the minimum price has been put at $1.50 (U.S.) per bushel, ($1.55 in the 1953 Agreement), basis No. 1 Manitoba Northern, in store at Fort William. No truly "equivalent" minimum price for No. 2 Hard Red Winter wheat at Kansas City can be precisely calculated. This "equivalent" has varied with changing differential transport costs to overseas markets (from Kansas City *vs.* Fort William) and with changing subjective judgments as to the quality discounts that might reasonably apply to No. 2 Hard Winter as compared with No. 1 Manitoba. On the basis of discounts recorded during the past five years, it might seem reasonable to assume an implied IWA minimum equivalent for No. 2 Hard Winter at Kansas City of $1.20–$1.30 per bushel.

Even if, for a given time, agreement could be reached on an implied "IWA minimum" of $1.25 for such wheat, there would remain the fundamental question as to whether that minimum should apply only to bulk wheat grain (with an

average subsidized export price of $1.56 in 1956/57 and $1.48 last year) or also to the more heavily subsidized wheat milled for export as flour (with corresponding implied subsidized prices of $1.34 and $1.22 per bushel, respectively). If to the latter, we would have to conclude that No. 2 Hard Winter wheat has already sold close to or below the minimum IWA price and that further significant reduction would be inconsistent with the price range of the Agreement. As a practical matter, however, the point is unlikely to be raised, partly because lower differential pricing of wheat for export flour is almost universal throughout the world (though Treasury subsidization is not).

Presumably more important in the changing export subsidy decisions of American officials have been (1) the more general international policy commitments which the United States Government has accepted as a cooperating participant of GATT, the FAO, and the International Wheat Council, (2) the strong opposition of the Canadian, Australian, and Argentine governments to subsidized export-price cutting, and (3) the knowledge that American export-price reductions would probably be followed immediately by corresponding price cuts by the grain marketing boards of other major exporting countries, since those boards have not been in the habit of sitting idly by, watching their overseas "commercial" markets contract.

These associated policy influences have apparently resulted in the development by responsible United States officials of a fairly definite, time-changing concept of the nation's "fair share" of the world's "commercial" import market for wheat, a concept which has been employed as a practical price-setting guide. When queried by members of the Congress as to why certain subsidy rates were put at existing levels, one well-informed American official made the following illuminating comments (*20*, pp. 34–38):[14]

> . . . there is concern in the Department about maintaining our fair share of the world market from year to year—not in any one year—as opposed to the year ahead or the year behind, but in terms of the trend. [p. 34]
>
> . . . the Secretary finally determines what our fair share would be. [p. 35]
>
> I think that the Secretary would take a percentage based on the historical position of the United States and the situation in the current year. [p. 35]
>
> We are in this position on the export of about anything we subsidize. We have international agreements that in using subsidies, we will try not to use those subsidies to take other countries' markets. [p. 36]
>
> . . . as you look at export policy on any commodity, you will have ups and downs in trade, depending on what others produce, the particular urgency an exporting country has at the time to hold a long or short position on stocks, the psychology in buying countries as to whether they are in an inventory upturn or downturn . . . [p. 36]
>
> [For wheat, our fair share is] somewhere between 25 to 30 per cent for the commercial market. I do not include that which is made available as gifts. I do not include in that anything that we sell where we create an additional

[14] Much of the discussion related to the cotton subsidy program; but the replies of the Deputy Administrator of the Foreign Agricultural Service of the Department of Agriculture (Mr. Ioanes) indicated that the same general operating guides applied also to wheat.

market such as the program with India. That I do not include in the fair share concept. [p. 38][15]

Quite clearly, the official "fair-share-of-market" concept is somehow related to historical trade records (which Chart 1 shows have varied greatly from year to year and from period to period in the case of wheat). Clearly, too, the concept applies to a share of the world "commercial" market, with "special" sales regarded as "additional." Finally, the "fair share" envisaged is not fixed and rigid—the same from year to year—but reasonably varies with changes in the magnitude and distribution of the import demand and also with the size and distribution of the exportable wheat supplies of competing countries.

Whether American officials go so far as to concede, realistically, that no foreign exporting country except Canada can reasonably be expected to hold back large stocks of exportable wheat for carryover into the following crop year is not clear. Indeed, past trade and stocks records suggest that American export competition caused undue restriction of unsubsidized Australian and Argentine exports several years ago, "undue," not because American exports were so large, but because their volume and pressure came not as a result of the "fair" competition of unsubsidized American farmers, but as a result of subsidy competition financed by domestic consumers and the national Treasury. It is this important point that in some past years, including 1956/57, American officials appear to have overlooked (*28*, pp. 9–14). And it is this point that the representatives of competing exporting countries continuously stress.

More recently, the various wheat export programs of the United States have been operated with more consideration of the interests of competing exporting countries. As previously noted, this consideration has been reflected in sharp contraction since mid-1957 of the nation's wheat barter transactions, triangular sales, "tied-in" sales, and long-term P.L. 480 Title I contracts containing inadequate global commercial-trade safeguards. Other observable "effects" have been scarcely less impressive. For example, the revised policy has been associated with more moderate Australian and Argentine carryovers (an approximation to traditional free-market conditions), with Canadian commercial exports of 260–300 million bushels annually, and with the obviously limited (though not low) percentage export figures shown in Table 6.

With full recognition of the rough, approximate character of the figures presented in Table 6, they may safely be used to indicate the general magnitude and changing course of the share of the world's "commercial" wheat exports supplied by the United States. In interwar years and in the early postwar period through 1948/49, the indicated percentages were market determined, not set by government officials (except to the extent that government "grants" kept the high early postwar percentages from being higher still). From 1949/50 through 1952/53 the only existing American export subsidy was that limited to wheat recorded under the International Wheat Agreement; and the related sub-

[15] Except for years of acute world wheat shortage, the percentages specified here appear excessively high if they are assumed to refer to "world" gross exports of roughly the same coverage as those represented in Table 6, p. 253. Indeed, they appear somewhat excessive even if interpreted as percentages of "world" *net* commercial exports or of the total net "commercial" exports of the four chief exporting countries.

TABLE 6.—AMERICAN "COMMERCIAL" EXPORTS OF WHEAT AS A PERCENTAGE OF WORLD "COMMERCIAL" EXPORTS, 1949–59, WITH PREWAR AVERAGES*

Period or year	Per cent	Year	Per cent
1925–30 av.....	20	1953/54.....	18
1934–39 av.....	9	1954/55.....	15
1945–49 av.....	30[a]	1955/56.....	13
1949/50.....	9[a]	1956/57.....	21
1950/51.....	26	1957/58.....	18
1951/52.....	41	1958/59.....	17
1952/53.....	31		

* Rough approximations by the writer, based primarily on world export data reported for 1934–59 in FAO, *World Grain Trade Statistics, 1958/59* (1960), p. 46; *ibid., 1957/58* (November 1958), p. 46; FAO, *Grain Bulletin* (Commodity Series, No. 10), January 1949, p. 54; International Emergency Food Council, *Report of the Secretary-General to the Fourth Meeting of the Council*, July 1947, p. 46. World "commercial" exports are here taken as roughly equal to "world" July–June gross exports of wheat less the "special" American exports shown in Chart 1. Minor "special" exports from other countries are disregarded, since they would not affect the over-all picture (except to raise the American percentage to 19 in 1957/58). The average for 1925–30 is based on August–July net export data shown annually in percentage terms in Chart 1, middle section.

[a] Basic data poorer than for other years, but general level is properly indicated.

sidized export price was essentially determined not unilaterally by American officials, but by the internationally negotiated IWA *maximum* price. With the outbreak of the Korean War and associated widespread stocksbuilding, and with the later (1952/53) outlook for an increased IWA maximum price, the expanded world import demand could be met only through supplementary purchases of non-IWA wheat at the high American market prices then prevailing (Chart 3). Through 1952/53, therefore, the governments of competing exporting countries voiced no objection to American "commercial" wheat exports that absorbed 25–40 per cent of the temporarily inflated total commercial exports.

It was not until after the IWA maximum price had been raised in 1953 (no longer serving as an effective American subsidy base), after the world commercial demand had subsided from its Korean War peak, after several bumper crops had raised world exportable surpluses to burdensome levels, and after the American IWA-subsidy program had been extended also to all non-IWA wheat that competing exporters became critical of American officials "taking an excessive share" (15–21 per cent) of the world commercial market.

Assuaged, but not wholly reassured, by the more encouraging American policy developments of 1958–60, which included extended intergovernmental consultations on export policy matters and continuous export-promotion cooperation through the Wheat Utilization Committee, officials of the chief wheat exporting countries "learned to live" with the American export subsidy system, but not to like it. Most of them still contend that they are ready to face any degree of export competition that *unsubsidized* American farmers offer, but that they object to competing with the United States Treasury.

A Basic Danger in Administered Export Pricing

One disturbing aspect of American export pricing that has been generally overlooked is the absence of any sound guide to the underlying economic equilib-

rium price for wheat, and the associated danger that administered "commercial" export prices will persistently be maintained at an excessively high level. With technological and other farming improvements rapidly raising wheat yields per acre and per man-hour throughout the world, with political pressures in many countries operating to delay downward wheat price adjustments, and with a separate, *secondary* export market recently available for large "special" surplus-disposal sales at cut-rate prices, the danger of overpricing "commercial" export wheat has become serious.

This danger has been further intensified by recent moves, necessary and desirable in themselves, to lessen the hardships that competing exporters have suffered from American export programs by promoting more bilateral and group consultation among representatives of the five major wheat exporting countries. A common interest shared by all of these exporters, particularly Canada, Australia, and Argentina, is the desire to maintain "satisfactory" commercial export prices. And since practically all "commercial" wheat export prices are now administratively set by representatives of the same five countries (with the tacit blessing of several respected international organizations impressed with the merits of "price stabilization"), the prospects and opportunities for artificial maintenance of "commercial" wheat prices at above-equilibrium levels have sharply increased.

Moreover, no matter how conscientious export-pricing officials of the various countries might be in trying to estimate the current equilibrium price for their wheat or in attempting to envisage "normal" current trade patterns, they could not find or construct any reliable guides to such prices or trade. Clearly, producer prices in the United States are too high; *current* wheat production tends to outrun domestic consumption and heavily subsidized exports, despite restrictive acreage controls and some additional help from the Conservation Reserve. Moreover, the much lower Canadian producer prices (essentially based on the unsubsidized net return from wheat marketings earned by the Canadian Wheat Board) are apparently also too high, since the Board has found it necessary to impose marketing quotas to limit the volume of grain that Prairie Province farmers would otherwise deliver at recent prices. The one paradoxical element in the picture is that at the same unsubsidized wheat prices, Australian producers (enjoying favorable wool prices) have not been anxious to expand their uncontrolled wheat production and marketings. Nor, of course, does anyone know how competitive American wheat growers would be at the same recent "world" export prices, which, conceivably, they may actually accept in a few years under a revised wheat program designed to relieve consumers and taxpayers from much of the burden of subsidizing unwanted surplus wheat. At such prices ($1.45–$1.50, basis No. 2 Hard Winter, Kansas City, or a national farm price average of about $1.25) would American production continue to outstrip the basic economic demand? Many experts think it would, even after an adjustment period of several years, but no one really knows.

If "commercial" export wheat has been overpriced in the past few years, the leading commercial importing countries have been the most adversely affected; their international payments have been raised thereby and their foreign exchange holdings reduced. However, the adverse effects of any such overpricing

have been widely distributed, extending even to importers of "special" export wheat and to the major exporting countries themselves.

Many importers of "special" export wheat have an interest in lower "commercial" export prices because they are required to purchase part of their import supplies on regular terms at the "commercial" level in order to qualify for purchases of "additional" cheaper "special" wheat. Furthermore, for all importers of "special" wheat, the commercial export price serves as the basis for determining (1) the number of bushels of P.L. 480 Title I wheat they can buy with the dollars authorized for wheat purchases under outstanding P.L. 480 Agreements, and (2) the amount of domestic currency they must deposit against imports of both Title I and Section 402 wheat.

For the major wheat exporting countries, on the other hand, the obvious, direct benefits of high export prices in apparently adding to their foreign exchange earnings and national income receipts have tended to obscure the very real and substantial, but less evident, disadvantages of administered export overpricing. Since previous and existing commercial export prices usually provide the best international guide to what later commercial export prices will be, administrative overpricing of such export wheat encourages the governments of many importing countries and minor exporting countries to maintain prices to their producers at levels higher than otherwise would have been planned.[16] This, in turn, results in heavier wheat production, smaller "commercial" imports, and larger competitive exportable supplies than would continue to persist if "world" export prices were allowed to stand at a lower level. And the over-all effect is to narrow the international "commercial" market for exports from the four major wheat exporting countries.

Thus, administrative overpricing of "commercial" export wheat may be as serious a threat to the world's commercial trade as the heavily subsidized American "special sales." And since the adverse effects of the latter are more readily perceived, more attention now needs to be given to the problem of securing sound economic pricing of the world's basic "commercial" export wheat.

OUTLOOK FOR THE COMING DECADE

With American wheat stocks now at unprecedentedly burdensome levels, with current production continuing to outrun all current demands despite unpalatable production controls and record exports, with the billion-dollar wheat program (for price supports and P.L. 480 exports) weighing heavily on the national budget, and with the American public becoming increasingly aware of the enormous economic, political, and social needs of the awaking underdeveloped countries, it is desirable to try to visualize the role of American wheat exports in the changing world of the 1960's. In shaping that world, the general foreign trade and aid policies of the United States, including the wheat export policy, will have great influence.

Any forward looking view of American export prospects and polices must rest on certain assumptions about the politico-economic structure into which those exports will fit. Two such basic assumptions underlie the following dis-

[16] This is true even of Canada and Australia, which return to producers the net proceeds earned on wheat sales priced at the "commercial" export level.

cussion. First, it is assumed that despite continued heavy armament expenditures, "Cold War" disturbances, isolated revolutions, and perhaps an occasional localized war, the world will be spared a major war during the present decade. Second, it is assumed that the economic policy makers of the principal nations will manage successfully to avoid any sharp, prolonged economic depression, and that irregular but persisting economic development will gradually raise levels of living in most countries of the world, highly developed and less developed alike.

Within this assumed politico-economic framework, what are the prospects for expansion of world commercial imports of wheat during the 1960's? What portion of those imports is the United States likely to supply? What additional outlets are likely to exist for "special" exports that can constructively be utilized without adversely affecting commercial trade in wheat or any other commodity, and without discouraging efficient agricultural production in recipient countries? These questions will be briefly discussed without attempt to formulate specific quantitative forecasts.

Prospective Commercial Import Requirements

Among the factors likely to have important effects on world commercial imports of wheat over the next decade, seven warrant special attention here: (1) population growth, (2) dietary patterns and tendencies, (3) production prospects in grain importing areas, (4) the size of rice surpluses in Asiatic exporting countries, (5) the level of commercial wheat export prices, (6) the changing import-purchasing power (foreign exchange earnings and grants) of grain-deficit nations, and (7) the extent of impingement of past and future "special" exports (of all commodities) on the future "commercial" import demand for wheat.

Population indications recently published by the United Nations for 1965 and 1975 are shown for selected regions in Table 7. It is noteworthy that the populations of the more prosperous, commercial importing countries of western Europe are increasing most slowly, both absolutely and percentagewise. By contrast, huge population increases are envisaged for the poorer, less developed countries of the world: India, Pakistan, Japan, "Other" Asia, Latin America, and even Africa—areas that have recently received the bulk of American "special" wheat exports. Moreover, in the less developed countries, particularly, the larger cities and urban communities generally are growing more rapidly than nearby rural districts.

As part of the Asian picture, the population upsurge of Mainland China also deserves attention. For that country, the population indications for 1975 clearly indicate that domestic grain production must be stepped up spectacularly during the coming decade simply to keep pace with the rapidly increasing population. And this, in turn, suggests that the substantial Chinese rice exports of recent years are not likely to be markedly expanded, nor perhaps even maintained, without associated severe hunger and distress among the Chinese people, a result that might be deplored but still accepted as tolerable by a dictatorial government more interested in other goals. A decade view should presumably not neglect the possibility (which now appears remote) that Mainland China might shift from the ranks of the "unfriendly" to the "friendly." If such a shift should

TABLE 7.—REGIONAL POPULATION INDICATIONS FOR 1965 AND 1975, COMPARED WITH 1955*

(Million persons except as otherwise noted)

Region	1955 Population	Indicated population		Absolute increase		Per cent increase
		1965	1975	1955–65	1955–75	1955–75
Wheat importing regions[a]						
Europe ex. Soviet Bloc.....	332	354	382	22	50	15
India	386	456	563	70	177	46
Japan and Pakistan.....	172	204	244	32	72	42
"Other" Asia ex. China....	332	400	509	68	177	53
Latin America	183	233	303	50	120	66[b]
Africa	216	256	303	40	87	40
Wheat exporting regions						
U.S., Canada, Oceania.....	197	228	261	31	64	32
European Soviet Bloc.....	274	320	369	46	95	35
Mainland China	600	720	894	120	294	49
World	*2,690*	*3,170*	*3,830*	*480*	*1,140*	*42*

* Data from United Nations, *The Future Growth of World Population* (Population Studies 28, 1958), pp. 69–75.

[a] Some of these regions include countries that rank as sizable net exporters of wheat—e.g., France in Europe and Argentina in Latin America. "Other" Asia includes the major Asiatic rice exporters.

[b] Argentina, included in the Latin American total, is expected to show a population increase of about 40 per cent during 1955–75, as contrasted with the high regional indication of 66 per cent. Argentina is the only sizable wheat exporter in Latin America.

occur, not only might a new outlet for American "special" wheat exports open up, but there would also be a possibility of increasing two-way commercial trade beyond the levels likely to exist under "unfriendly" relationships.

No less important than regional population growth rates for the world's wheat trade and policies are the differences that exist in national dietary patterns and tendencies. The most important of these relate to the level, composition, and trend of per capita total cereal consumption, and also to the changing place of wheat in various national diets (*3*, pp. 15–17; *31*; *32*, pp. 244–46; *33*; *34*; *35*, pp. 239–59).

In the traditional commercial importing countries of Western Europe, wheat is clearly the dominant cereal; per capita consumption of all cereals combined is typically moderate (800–1,000 calories a day) except in the lower-income countries of the South; and almost everywhere per capita cereal consumption has been declining as fruits, fats, meat, sugar, and other preferred foods have been consumed in increasing amounts. This has meant a small over-all decline in the *per capita* consumption of wheat in Western Europe, even though wheat has fully maintained or actually enlarged its place in the diets of the rye-consuming and corn-consuming areas, where it has persistently tended to displace those less desired grains.

Thus far, regional population increases appear to have slightly more than offset the minor tendency for per capita wheat consumption to decline; but *the coming decade seems more likely to witness an approximately stationary aggregate food consumption of wheat in Western Europe. Even under such condi-*

tions the total utilization for food, feed, and seed combined might increase significantly but probably only if low-priced import wheat becomes able to compete effectively with coarse grains for feeding European poultry and livestock.

In any case, there appears to be little prospect for European commercial imports of *overseas* wheat to increase substantially during the coming decade (though Common Market imports of French wheat presumably will) unless existing government decisions to maintain high support prices and "protective" import controls are relaxed. Such relaxation might in fact, be witnessed, but presumably only (1) if "Cold War" threats subside, (2) if substantially more land is needed to provide increasing supplies of livestock products, fruits, and vegetables for a more prosperous, growing regional population, and/or (3) if American wheat price supports are sharply reduced and "world" commercial export prices are lowered on a semipermanent cooperative or free-market basis. In this connection it is noteworthy that the Common Market countries have reportedly been considering a proposal for tieing the basic Common Market goal price for wheat to the price received by producers in the United States (plus all transport and handling costs).

In the poorer, grain-deficit countries of Asia, Latin America, and Africa, foodgrain consumption patterns and trends are almost the reverse of those in Western Europe. Rice, grain sorghums, corn, and/or barley are usually the dominant foodgrains; and per capita cereal consumption is not only characteristically heavy (1,100–1,500 calories per day), but it has shown no clear tendency to decline except in a few countries, like Japan, that rank above their neighbors in income level.[17] Moreover, in virtually all of the less developed countries that depend heavily on rice and coarse grains for food, wheat is a preferred, semiluxury cereal, increasingly desired by the rapidly growing urban populations. In such areas, the tendency has often been for wheat to gain a firm place in the diet in the form of bakery-baked rolls, raised bread, or sweet goods, used only for breakfast, between-meal snacks, and/or workers' lunches.

To this increasingly important diet diversifying role of wheat, has been added that of gradual displacement of coarse grains (but not rice) as the staple cereal in the diets of populations moving to substantially higher income levels. And finally, in a few developing countries, or parts of countries, where wheat is already established as a basic staple (e.g., West Pakistan, Northwest India, Chile, Israel) greatly increased quantities of wheat will be needed during the coming decade merely to maintain recent per capita consumption levels for the increasing populations.

Thus, *in the rapidly growing underdeveloped countries of the world, the stage is already set for sharp expansion of wheat consumption as soon as the peoples of those countries can afford to buy more wheat.* How soon this will be is unclear: it will undoubtedly be earlier in some countries than in others. And in each country it will depend not only on the ability and willingness of individual inhabitants to pay for more wheat, but also on whether the governments of those countries are able and willing to assume the financial obligations asso-

[17] For many of the less developed countries, however, the available official data on grain production are so seriously incomparable over time that the basis for judging consumption trends is inadequate.

ciated with importing more foreign wheat (on either "commercial" or "special" terms).

So far as the buying responses of individuals are concerned, recent experiences with P.L. 480 wheat (channeled to urban commercial markets and sold at going market prices in a few underdeveloped countries) clearly suggest that increasing numbers of individuals in the developing countries will stand ready to purchase more and more wheat products over the coming decade if and as economic development progresses and per capita real incomes rise.

More uncertain are the future attitudes of the various governments concerned. These will largely depend on a number of essentially indeterminate factors: (1) the rate of expansion of domestic production of foodgrains in those countries, (2) their changing import-purchasing power (size of foreign exchange earnings and grants) and other "planned" uses for foreign exchange, (3) the size of exportable rice surpluses in Asiatic exporting countries, (4) "commercial" export prices of wheat, rice, and other substitutable grains, and (5) the availability of the same grains on "special" export terms. All five of these determining factors will be heavily influenced by past and future actions taken by the United States Congress and American administrative officials, as well as by the governments of the underdeveloped countries concerned and, in lesser degree, by other governments.

The size of future foodgrain crops in the various underdeveloped countries, including the Asiatic rice exporters, will depend initially on the existing and future agricultural "plans" of those countries. So far, the net progress actually made under such "plans" has been disappointingly small. The past tendency has been to pay too little attention to needed basic changes in agricultural organization, methods, rotation patterns, seed quality, and similar elements. Time and again in recent years officials and special missions of the International Bank for Reconstruction and Development and the International Monetary Fund have urged the individual governments of underdeveloped countries to invest more heavily in facilities and activities designed to raise agricultural productivity, with emphasis on crops for which a natural advantage exists, and which, if expanded, would raise foreign exchange earnings on exports or reduce foreign exchange outlays on imports (e.g., *36*, pp. 333–35). Increasing future moves in this direction now seem practically assured—moves that presumably will be speeded by the Freedom from Hunger Campaign to be promoted by the FAO during 1960–65.

Yet even if, as seems probable, the coming decade witnesses modest increases in *per capita* agricultural production in the more important underdeveloped countries, this does not necessarily mean that the total foodgrain import demands of those rapidly growing nations will be reduced. Indeed, the opposite appears to be more likely, particularly with respect to wheat, which will be increasingly demanded as incomes rise. In this connection, too, there is a question as to the relative emphasis individual governments will put on encouraging increased output of foodgrains vs. other food (and feed) crops vs. fiber and other industrial crops. All of these products are needed by growing populations with rising incomes. And since these products compete for arable land, their relative rates of expansion over the coming decade will be mainly determined by traditional

crop rotation patterns, changes in agricultural practices and seed use, and existing price relationships.

The governments of underdeveloped grain-deficit nations have much less freedom of action in dealing with foodgrain prices than do the governments of higher income countries. Their limited freedom is tied to the fact that they are faced, on the one hand, with meager foreign exchange earnings and small national tax receipts, and, on the other hand, with many poor urban consumers who obtain 70–75 per cent of their total food calories from grain, which may take two-thirds of their low family incomes. Under such circumstances, the responsible governments can neither *raise* domestic market prices without regard to the low incomes of domestic consumers, nor *lower* domestic market prices below "world" levels, without payment of ill-afforded subsidies on imported grain. Obviously, too, such governments are not in a position to refuse to import critically needed foodgrain in years of crop failure, even if the associated expenditure of foreign exchange retards their economic development programs. Thus, staple foodgrain prices in such countries tend to be loosely tied to corresponding "world" price levels. And this tendency is strengthened by the fact that many of the governments concerned have considerable leeway to decide which of several semi-substitutable grains (wheat, rice, corn, grain sorghum, and/or barley) they will import in the largest quantities to fill a domestic foodgrain gap. In making such decisions, most officials are presumably heavily influenced by existing international commercial prices of the different grains and also by any "special" sales terms that are available.

Indeed, the governments of all underdeveloped countries that participate actively in world trade, either as importers or as exporters are greatly concerned with and influenced by "world" export prices of the products they buy or sell. And they also watch and are influenced by the international prices of substitutable products. This is as true of the rice exporting countries of Asia as it is of neighboring grain-deficit nations. Consequently, there is good reason to believe that the size of non-European commercial imports of wheat over the coming decade will be markedly affected by the commercial export prices and price policies of the leading wheat exporting countries. *If potentially large import markets of Asia, Africa, and Latin America are to absorb increasingly large amounts of commercial export wheat, the prices of such wheat must be attractively low.*

Furthermore, the governments of those underdeveloped countries must have access to increasing amounts of convertible foreign exchange. Their ability to buy more commercial export wheat will depend heavily on the rate at which their economic development proceeds, their success in selling increasing exports to the highly developed nations, and the generosity of the latter (particularly the United States) in providing large economic-assistance grants of foreign exchange and in renegotiating, on a grant basis, a major part of the large loans previously made to such countries, including outstanding P.L. 480 Title I loans.[18]

[18] Even though every outstanding P.L. 480 loan permits or definitely specifies repayment in domestic currency, the scheduled repayments will not only represent a significant (in some cases, heavy) drain on the limited domestic tax funds of the debtor country, but they also will substitute for American dollar exchange that otherwise would be earned if (and to the extent that) the repayments are used by the United States Government to meet "ordinary" expenses in the country concerned.

Finally, the amount of commercial export wheat that non-European countries will buy during the coming decade may be substantially curtailed by excessive zeal to make large "special" export sales to some of those countries. Although the most objectionable single form of such concessional sales, American "multilateral barter," is now fairly well controlled (p. 241), other types of "special" sales still represent a disturbing threat to the world's commercial trade—a threat both to commercial exporters and to commercial importers.

At present it does not appear likely that expanding Asiatic rice surpluses will compete vigorously with wheat in the near future for widening non-European import markets. In the light of postwar rice developments, it is difficult to believe that advances in rice production during the next ten years will be sufficient to meet the needs of the rapidly growing populations of the various rice exporting countries and at the same time to increase exports sharply above current levels. As noted earlier (p. 256), this may also prove to be true for Communist China, whose rice exports have risen spectacularly in recent years; but the export trade of totalitarian governments bends so flexibly and unpredictably to changing official goals that Communist China could conceivably rise to top place in the world's rice export trade before the end of the decade. If such an unexpected development should occur, the demand of Asian countries for foreign wheat would probably be correspondingly curtailed. In general, it seems more reasonable to expect continued slow, irregular growth of the world's rice trade, a rate of growth that can easily be absorbed.

Over-all, then, the outlook is for some expansion of "world" commercial imports of wheat over the coming decade. This is attributable not to anticipated increases in demand in the traditional wheat markets of Western Europe, but to the increasing demand for wheat as a preferred cereal in the rapidly growing and developing countries of Asia, Africa, and Latin America. How much and how fast "world" commercial imports will expand will depend on a number of unpredictable elements, perhaps most heavily on the general economic policies and specific grain-price and grain-trade policies of the United States and Canada.

Prospective Supplies and Policy Issues in Exporting Countries

Historically, Argentina, Australia, and lesser wheat exporters have shown a strong tendency to ship out each year practically all of their available exportable wheat, regardless of world price levels. Over the past three decades, the Soviet Union, too, appears to have followed this general principle except when the Soviet Government deemed it desirable to build "security" stocks, or, alternatively, considered it worthwhile for political or economic reasons to "overexport," leaving inadequate supplies for domestic consumers. In contrast, the United States has continuously stood out among all exporters as the primary residual holder of surplus wheat stocks; and Canada has ranked second in this respect, particularly when bumper Canadian crops have coincided with heavy world surpluses. These diverse national export tendencies were as clear in the 1920's and 1930's (under virtually free markets and private stocks holding) as they are today—in a couple of instances even clearer; and any realistic outlook for the coming decade must take account of their fundamental, persisting nature.

Important, too, are the related "export facts" that (1) no country except the United States has ever made, or is soon likely to make, large "special" exports involving big price concessions, though recent Canadian grants and credit sales to Colombo Plan countries have been somewhat similar on a much smaller scale, and (2) of the four major wheat exporting countries, only the United States has persistently subsidized "commercial" wheat exports by payments from the national Treasury and/or domestic consumers, and (3) the American "special" sales and general export subsidies have both been strongly protested by other exporting countries as "unfair export competition."

For the coming decade the important question is: What are the prospects for substantial changes in the exportable wheat supplies of the leading wheat exporting countries? Or, more specifically, what are the prospects of sizable changes in the wheat production and consumption of those countries? These questions can be most easily discussed with reference to Tables 8 and 9 (p. 265).

TABLE 8.—WHEAT PRODUCTION AND DISPOSITION OF THE FOUR CHIEF EXPORTING COUNTRIES, AVERAGES 1925–59*

(Million bushels)

Average[a]	Crop	Domestic use	Net exports	Year-end stocks[b]	Crop	Domestic use	Net exports	Year-end stocks[b]
		Argentina				*Australia*		
1924–29	249	82	153	85	144	46	97	33
1929–34	228	91	139	81	185	53	121	60
1934–39	244	100	122	96	154	54	107	50
1949–54	197	121	73	96	191	75	103	101
1954–59	239	139	106	134	162	74	93	116
		Canada				*United States*		
1924–29	427	106	306	69	826	628	180	134
1929–34	354	114	224	165	792	693	91	334
1934–39	263	110	173	101	716	687	33	155
1949–54	544	148	293	304	1,117	667	324	524
1954–59	436	162	288	608	1,067	598	399	1,028

* Official data supplemented by Food Research Institute estimates of August 1 stocks for Argentina and Australia. Net exports include flour in grain equivalent.

[a] For five-year periods beginning July 1 for the United States, August 1 for other countries.

[b] Southern Hemisphere stocks as of August 1 include wheat required for domestic use during the following four to five months.

Considerable unleashed pressure to increase wheat production exists in the chief exporting countries. It appears to be least in Australia, uncertain but significant for the future in Argentina and France, more substantial in Canada, and great in the United States. In the USSR, where wheat acreage and production have recently expanded sharply, primary emphasis now is on increasing yields per acre of all grains and particularly the production of grain for feed.

Over the past two decades, all of these countries have improved their wheat growing methods and techniques (most strikingly the United States), raising bushel-yields per acre and per man-hour. These upward trends are expected to continue. Moreover, all major exporters except the USSR have materially re-

duced their planted wheat acreage, thus suggesting the possibility of future re-expansion, particularly in North America, where government marketing controls have played an important role. Finally, all of these countries except the USSR are now consuming less wheat per capita than earlier; and domestic utilization totals have either declined (as in the United States), or have been sustained or raised mainly as a result of marked population growth (Table 8). In the USSR, ***bread-grain*** consumption for food has probably declined moderately on a per capita basis, but increasing substitution of ***wheat*** for rye has combined with population growth to bring a considerable increase in the total domestic utilization of wheat. Since per capita cereal consumption is still notably high in the Soviet Union (probably well over a pound a day) future reduction is to be expected as livestock products and other "quality foods" increase.

Australian and Argentine farmers have cut wheat sowings on a purely voluntary basis; but the responsible factors have differed for the two countries. In *Australia*, the whole agricultural economy has changed greatly in the postwar period: crop rotation patterns have widened; fallow has declined; grass and fodder crops have increased; and wool and meat production have assumed an even more dominant position than before, both in the domestic farm economy and in the nation's international financial balance. It is possible that these revolutionary changes have turned Australia into a high-cost exporter of wheat, and that at unsubsidized competitive prices American farmers, as well as Canadian, would produce exports almost three times as large as Australian producers.

This year, for the first time, Australian wheat producers will receive a subsidy from domestic consumers and the Commonwealth Treasury that may amount to something like 17 cents a bushel for the December-November crop year (*37*, p. 5), a subsidy associated with the Australian Wheat Price Stabilization Plan that in a number of earlier years benefited consumers at the expense of producers. Because of the "insurance payment" character of the present Australian subsidy, Commonwealth consumers and taxpayers may willingly support similar subsidies for the three remaining years of the present Stabilization Plan. But it is inconceivable that a wheat export subsidy will be tolerated long in Australia. Such a persisting subsidy would not only put a heavy drain on the national economy, but it would greatly weaken Australia's righteous opposition to "unfair export competition," so often expressed in GATT and other international organizations and committees. Assuming, then, that Australian producers may face substantially reduced wheat prices after the next three years, further cuts in Australian wheat plantings and production seem likely to occur unless price prospects for wool and meat decline.

The lower *Argentine* wheat acreage levels of postwar years have also been associated with diversion of former wheat land to fodder and livestock. But Argentine wheat producers, unlike Australian, have suffered from additional government-imposed handicaps: successive Argentine governments have fixed government monopoly prices on wheat considerably below international levels and have continued farm-tenant and wage regulations of the Perón era that have further emphasized the relatively greater attractiveness of concurrent livestock prices.

Since January 1959, when the last currency devaluation occurred, more liberal

national economic policies have gradually reduced government controls over Argentine grain marketing and pricing. Official prices for wheat (previously "fixed," now "guaranteed minimum" levels) have been markedly raised, and government officials have declared their intention to encourage increased production and exports of wheat and other grains as well as livestock products. In spite of these more promising developments, the National Grain Board has recently been forced to buy wheat at the basic minimum price of 300 pesos per quintal ($.98 per bushel) for No. 2 Semi-hard at Buenos Aires—a price well below the international export value. Even at this low minimum price private grain firms were unable to make a profit on export wheat in the early months of 1960, partly because they had to pay the government a number of additional transaction taxes and special fees (including a 20 per cent "retention tax" on the assessed value of all exported grain), and partly because their costs were temporarily raised by congestion of transport and port facilities.

The longer term future for Argentine wheat exports remains uncertain. Clearly, the grain and livestock producing *potential* of Argentina is great. Clearly, too, Argentina occupies a favored position as the only large wheat exporter on the rapidly growing and developing continent of South America. But these advantages cannot be effectively exploited until the Argentine Government is able, with assistance from the International Monetary Fund and the World Bank, to control inflation and to get agricultural and general economic development reestablished on a firm basis. Thus, the desired future expansion of Argentine wheat exports rests heavily on wise government decisions and actions on the home front, on their support by the Argentine people, and on adequate and timely assistance from the outside. Moreover, it may depend increasingly on curtailment of United States "special sales," particularly to Latin American countries.

As compared with the uncertainty that exists about Argentina's future wheat production and exports, the outlook for *France* appears fairly clear, at least for the early part of the coming decade. Table 9 shows that since the late 1920's France has shifted from a net import position to her present rank as the world's sixth largest net exporter of the world. Although France is endowed with land and climatic conditions more favorable for wheat production than most of her European neighbors, her present export position is probably tied more closely to the "protection" that successive French Governments have given domestic wheat producers. In recent years, such protection has included not only artificially high prices to domestic consumers, but also sizable wheat export subsidies which were materially reduced by the currency devaluations of 1957 and December 1958. Since the European Economic Community was organized, French wheat has benefited from an enlarged protected market, which will afford special price and marketing advantages for larger French surpluses, at least during the next few years. The outlook for the late 1960's is more uncertain, since it depends heavily on policy decisions still to be taken by the Community. Whether more restrictive or more liberal trade policies will prevail with respect to imports from outside areas will probably be decided partly with reference to the price and trade policies of the United States and other overseas wheat exporting countries and partly with reference to the developing trade policies of the "Outer Seven."

Although some concern has been expressed about the increasing threat of France to North American wheat exports to Common Market countries, considerably more attention has recently been given to the much greater threat of expanding *Russian* exports. As indicated in Table 9, wheat net exports from the

TABLE 9.—WHEAT NET EXPORTS OF COUNTRIES OTHER THAN THE FOUR CHIEF EXPORTERS, AVERAGES 1925–59*

(Million bushels)

Exporter	Destination	1925/26–1929/30	1934/35–1938/39	1949/50–1953/54	1954/55–1958/59
France[a]	All countries	(45)[b]	(3)[b]	7	34
USSR	All countries	16[c]	22[c]	60	116
USSR	Soviet Bloc countries[d]	...	...	30	89
USSR	Outside Soviet Bloc	...	...	30	27
Soviet Bloc[d]	Outside Soviet Bloc	46[e]	100[e]	35	...[f]
"Others"[g]	All countries	30	52	45	55

* Based on official data, including flour in grain equivalent, with some adjustments and approximations for the USSR and the Soviet Bloc by the U.S. Department of Agriculture and by the Food Research Institute. Except for the variable group of countries designated as "Others" (see note [g]), averages are calculated from algebraic sums that take account of any recorded net imports for individual years.

[a] Including trade in semolina and alimentary pastes.

[b] Net imports.

[c] Primarily to countries other than those now included in the Soviet Bloc.

[d] The Soviet Bloc is defined to include the USSR, Bulgaria, Hungary, Rumania, Czechoslovakia, Poland, Eastern Germany (and, in prewar years, also Lithuania, Latvia, and Estonia).

[e] Including approximate shipments to Western Germany from former German areas now in Eastern Germany and Poland.

[f] Less than 500,000 bushels: sizable USSR net exports to "Outside Soviet Bloc" were practically offset by net imports of other Bloc countries from "Outside."

[g] Net exports of all net exporting countries other than the four chief exporting countries, France, and the Soviet Bloc. The number of countries included in the group varies from year to year as individual countries shift back and fourth between a net export position and a net import position.

USSR rose from an annual average of about 20 million bushels in prewar years to 60 and 116 million, respectively, in the two successive five-year periods ending in 1954 and 1959. Moreover, a new record net export peak of 200 million bushels was reported for the crop year 1958/59, when the Soviet Union harvested a huge wheat crop of 2,700 million bushels, that was used partly for export and partly to build up emergency stocks. This is, indeed, a disturbing picture, disturbing particularly to those who accept the trend of "total exports" as given, mechanically extrapolate it into the future, and neglect the implications of the distribution of exports by destinations.

Behind these bits of alarming evidence, however, are pertinent facts that lead to somewhat more moderate estimates of the prospective pressure from Russian wheat exports on "world" markets during the coming decade. These facts may be briefly summarized.

(1) A small part of the increased postwar exports of the USSR—say 10 million bushels—merely reflects the inclusion in Russian statistics of exports from annexed areas that in prewar years added to the exports of Rumania (2, p. 4) and the Baltic countries.

(2) The recent striking increase of Soviet exports has been primarily due

to expansion of the sown wheat acreage of the USSR from 38.5 million hectares (95 million acres) in 1950 to a 1957 peak of 69.1 million hectares (171 million acres), an increase of about 80 per cent (*38*, pp. 400–01). This phenomenal expansion (not fully sustained in the two following years) largely reflected the "planned" plowing up of virgin lands in semihumid and semiarid regions east of the Volga and Urals (Siberia and Kazakhstan), which cannot be, and is not expected to be, extensively continued. Another 10–14 million acres of the recently increased wheat plantings represented a shift of cultivation from rye to wheat; and this source of wheat acreage expansion is also ended. No further reduction of the rye acreage is "planned," according to Soviet authorities, who do not want to sacrifice the higher yields per acre normally associated with rye (*39*, p. 17).

(3) A much smaller part of the recent increase in Soviet wheat production and exports was due to improved yields per acre. Between the single year 1950 (probably reasonably representative for its time) and the five-year period 1954–58, the increase in the average yield per acre of wheat was 17 per cent; between 1950 and the weather-favored years 1956–58 it was 27 per cent (*38*, pp. 400–01, 424–25). To a considerable extent these increases reflected the planting of virgin lands and better crop weather in the later years. Moreover, official emphasis on expansion of sowings and the initial high yields available from virgin lands led to reduction of summer fallowing; and return to a more normal percentage of fallow (or to a suitable substitute rotation) will be necessary even for maintenance of the 1954–58 average yields. Such adjustments may have accounted for part of the significant decline in wheat sowings that has occurred since the 1957 peak.

(4) The current Seven Year Plan puts great emphasis on doubling meat production during 1960–65, a goal that requires much heavier production and use of grain for feed. Indeed, for livestock feeding in 1965, 85–90 million tons of feed concentrates are planned, an amount equivalent to about half of the total planned grain production of that year (*40*). Such grain is expected to be obtained "by plowing up new lands and by revising the structure of sown areas with a view to displacing low-yield crops with those of higher yield and expanding sowings of corn" (*41*, p. 26). But no such rapid plow-up of land is expected as took place over the preceding decade; and diversification and better rotations, not successive grain crops, are planned for the newly plowed land of the northwest forest areas. Indeed, the total grain areas will perhaps do well to be maintained at about the 1958 level; and on the basis of past experience, an increase of 25 per cent in the average yield per acre (from 1954–58) is about as much as can be expected. This would result in an output considerably less than the lower limit of the 164–180 million tons of grain "planned" for 1965, thus suggesting that intensified efforts may be made to shift some land from low-yielding wheat to higher-yielding coarse grains. It is also probable that more bread grain (mainly rye) will be used for feed.

(5) The great bulk of the wheat exports of the Soviet Union have recently been directed not to the commercial markets of the "Western world," but to the Soviet satellite countries of Eastern Europe. This group of countries, which was a sizable net exporter of wheat and other grains in prewar years (basis postwar, as well as prewar, boundaries) is currently a chronic deficit area. Moreover, it

seems likely to remain so during much of the coming decade (though probably in declining degree) because of the fundamental, persisting nature of most of the factors primarily responsible for the postwar trade shift: extensive industrialization of some areas (e.g., East Germany), collectivization of agriculture, growth of population, and pronounced dietary shifting from rye and corn to wheat with perhaps some slight reduction of high grain-potato consumption in favor of modestly increased consumption of livestock products (which require still larger quantities of grain for feed).

(6) In view of the important boundary changes made in Eastern Europe at the end of World War II and of the subsequent political and economic reorganization of the Eastern European countries in line with Soviet plans, the most comparable and competitively meaningful export series shown in Table 9 for any Soviet area is the combined USSR-Eastern European total net exports to the outside world, a series designated as the net exports of the "Soviet Bloc." Unlike the export data for Russia alone, these more inclusive regional export figures show a marked *decline*—from approximately 100 million bushels in 1934–39 to 35 million and .4 million, respectively, in the two successive five-year periods ending in 1959. Even in the banner year of 1958/59, when the total net exports of the USSR reached 200 million bushels, the aggregate net exports of the Soviet Bloc (including the USSR) to the "outside world" amounted to only 38 million. The latter figure is clearly a much better index of Soviet competitive pressure on "world" commercial wheat markets than is the 200 million bushel total for the USSR. And it is presumably better, too, than the corresponding 50 million bushel figure for Russian exports to the "outside" world, since the Soviet Bloc total allows, in addition, for the commercial exports made by certain Eastern European countries to Western Europe and also for the compensating wheat imports taken by the Bloc from "outside" countries.[19]

How, then, do these various considerations balance out? What is the over-all outlook for future commercial wheat export pressure from the Soviet Bloc? The size of future Soviet Bloc exports will undoubtedly depend primarily on the changing future emphasis that the Soviet Government places on meeting domestic meat consumption goals as compared with promoting other economic, political, and/or military goals that might more quickly be reached through the expansion of Soviet wheat exports to "outside" areas. However, on the basis of what is now known or believed about Soviet plans and desires, no better "guesstimate" of future Russian wheat exports appears to be available than that indicated several months ago by Lazar Volin, of the United States Department of Agriculture (*42*).

In looking forward to 1965, Volin suggested that, given "normal" weather conditions and maintenance of the bread-grain area, the Soviet Union might then export something like 240 million bushels of wheat (gross total), sending some 2½ million metric tons (roughly 90 million bushels) to the satellite countries and another 4 million tons (150 million bushels) to "outside" markets.

[19] Soviet Bloc imports tend to lessen the over-all pressure of "world" exportable supplies on "outside" commercial markets except to the extent that North American "special" sales to Bloc countries substitute for Russian wheat that is thereby saved and diverted to "outside" commercial markets. In the latter case, competitive selling pressure is actually increased.

V. P. Timoshenko regards these figures as on the top side of a wide range, because of the pressure that seems likely to exist to shift from wheat plantings to higher-yielding coarse grains and hardier, higher-yielding rye for needed domestic feed. For present purposes, the writer will use 200–240 million bushels as the indicated gross wheat exports of the USSR as of about 1965; this would seem to imply total *net* exports from the Soviet Union of 195–235 million bushels and perhaps 110–140 million to countries outside the Soviet Bloc.

Although combined Soviet Bloc net exports have recently been running some 25 million bushels lower, on the average, than Russian exports to "outside" areas (because Polish wheat imports from the "outside" have been larger than the wheat exports made by other Eastern European countries to "world" markets) there is no assurance that this will continue to be true over the next five years in view of the potentially great grain producing powers of the Eastern European region. On the other hand, the growing populations of the Eastern European countries will probably increasingly substitute wheat for rye and corn in their diets; and in some areas, bread-grain production may be held down by increased emphasis on planned expansion of livestock and feed grains. In view of these varied considerations, the writer is inclined to use a range of 100–125 million bushels, as a rough indication of the prospective average volume of Soviet Bloc net exports of wheat in the mid-1960's.

At that level, the combined Soviet Bloc net exports would be 100–125 million bushels larger in the mid-1960's than they were on the average during the past five years, and they would be at least equal to the highest five-year average recorded during the prewar period (Table 9). Morover, it is noteworthy that Soviet wheat exports are normally sold on "commercial" or "semicommercial" terms: they do not create additional import markets, but substitute for other wheats on existing markets, primarily in Western Europe. If then, the indicated Soviet Bloc exports of the mid-1960's are all counted as "commercial," and if the world's commercial import market should expand by 5 to 10 per cent over the next five years, Soviet Bloc exports would supply roughly 15 per cent of that market under "average" conditions, as contrasted with less than 3 per cent during 1954–59.

Thus, it now seems reasonable to expect substantially increased commercial exports of wheat during the 1960's from the major exporting areas outside of North America—from the Soviet Bloc, France, and probably Argentina. Moreover, the prospective increase, say 125–175 million bushels as of the mid-1960's, would considerably exceed the additional demand that might then exist as a result of possible expansion of the "world" *commercial* market by 5 to 10 per cent (40–90 million bushels). Obviously, such developments would mean further contraction of the commercial wheat export markets of Canada and the United States unless major changes in North American price, export, and foreign-aid policies should expand the total commercial import demand more than is here envisaged, and/or should discourage other exporters from competing so actively on "world" markets.

For *Canada* and the *United States*, traditional holders of the world's surplus wheat stocks, the outlook for an increase of 125–175 million bushels in com-

mercial exports of other countries by the mid-1960's appears grim. The significance of such a quantity of additional commercial shipments can best be appreciated by comparison with the recent wheat exports of the two countries shown in Table 10.

TABLE 10.—NORTH AMERICAN "COMMERCIAL" AND "SPECIAL" EXPORTS OF WHEAT, 1954–59, WITH PREWAR COMPARISONS*

(Million bushels)

Export class and country	Prewar averages		Crop years ending				
	1924–29	1934–39	1955	1956	1957	1958	1959
"Commercial" exports[a]	486	206	368	411	434	436	412
Canada	306	173	252	312	263	289	274[b]
U.S.	180	33	116	99	171	147	138
"Special" exports	—	—	158	241	376	280	321
Canada[c]	—	—	...[d]	...[d]	1	31	20[b]
U.S.	—	—	158	241	375	249	301
Combined net exports	486	206	526	652	810	716	733
Canada	306	173	252	312	264	320	294
U.S.	180	33	274	340	546	396	439

* Based on official trade data reported for July-June years for the United States, and for August-July years for Canada; flour included in terms of grain equivalent. United States "special" exports from U.S. Dept Agr., *The World Grain Trade* (FAS-M-53, April 1959) and *U.S. Wheat and Flour Exports Under Government Programs for 1957/58 and 1958/59* (mimeo., March 16, 1960). Canadian "special" exports through 1957/58 as reported by the Canadian Department of Trade and Commerce (letter dated June 1959) with adjustments by the writer as indicated in note [c]. All totals represent the summation of the indicated Canadian and U.S. figures and therefore artificially combine exports of two different crop years.

[a] Reported total net exports of each of the two countries minus corresponding "special" exports.

[b] Preliminary approximation of the Food Research Institute.

[c] All reported "special" exports except those based on credits running for less than five years at rates of interest comparable with those charged by the Export-Import Bank. This adjustment was made because American-reported "special" exports do not include exports under Export-Import Bank credits, which are essentially semicommercial.

[d] Less than 500,000 bushels.

It is noteworthy that the anticipated additional exports are a fourth to a third as large as the combined "commercial" wheat trade of the two North American exporters, and of the same general size as the total "commercial" exports of the United States alone. The associated threat to North America's commercial wheat trade and to the dominant international pricing position of the Canadian Wheat Board is clear.

How will Canada and the United States respond to this threat if and as it develops? Will they try to isolate Soviet exports and exclude them from the leading commercial import markets? Will they seek "compensatory" outlets for "special" exports? Will they reduce commercial prices as one means of improving the supply-demand balance? Or will North American wheat stocks continue to rise to higher and higher peaks that threaten a bigger, later crisis?

Some Western observers might hope the problem could be solved by getting importer members of the International Wheat Council tied to commercial import quotas that would not permit substantial imports of Soviet Bloc grain. Actually, however, considerable leeway for increased Soviet imports exists under

the 1959 Agreement; and any hope that the existing margin would be substantially narrowed rather than widened in a subsequent comprehensive Agreement signed by practically all importers would seem to be a sheer illusion—barring intensified Cold War difficulties. Nor should it be overlooked that the definition of "special" exports is wide, that the Soviet Union could easily arrange to make semicommercial exports that would classify as "special" trade under the 1959 IWA, and that such "special" trade is not subject to effective controls under that Agreement.

A second "easy solution" for the North American exporters might appear to be a compensating expansion of "special" exports. But the preceding analysis has shown that the "special" exports of the past five years have significantly encroached on commercial export markets for wheat and other cereals, that they have often resulted in intergovernmental disputes and hard feelings, that they have involved heavier public subsidies than were immediately apparent, that they have strengthened administrative pricing at above-equilibrium levels, and that the related long-term international loans have been cumulating increasingly heavy debt burdens for the recipient countries to repay or to refuse to pay in future years. Then, too, there is the related question as to how the North American countries would share "compensating 'special' exports." Table 10 documents the well-known fact that only the United States engages heavily in "special" grain trading. Canada would neither pay for nor receive the peculiar kind of "compensation" that expanded "special" exports would provide. And, conceivably, even United States taxpayers would object to further increase in the enormous costs associated with such exports, at least without some proof that they have been performing a constructive function reasonably commensurate with the cost.

Finally, probably the most pertinent question to be asked about proposals for increasing North American "special" exports is where enlarged "additional consumption" markets are to be found. Certainly, the United States Department of Agriculture has long been seeking for wider noncompetitive markets for "special" wheat exports, and since June 1959 the intergovernmental Wheat Utilization Committee has joined the search under a "Food for Peace" banner. But every person and group concerned has continued to find it extremely difficult to locate countries that will absorb "additional" imports of any grain without interfering with the growth of commercial imports of wheat, rice, or coarse grains that otherwise would take place. At the recent annual average level of 300 million bushels, North American "special" exports of wheat have shown many signs of overextension and displacement of commercial trade; and it seems probable that this average level cannot be maintained on a really constructive basis over the next five years.

Even if there were no threat of future contraction of North American wheat exports, the persisting tendency for current wheat production to exceed all current demands and the unprecedentedly heavy North American wheat carryovers of 1959 and 1960 make basic supply-demand adjustments imperative. The postwar build-up of wheat stocks in Canada and the United States is shown in Table 8, p. 262. Although the 1960 Canadian carryover, expected to approximate 500 million bushels, will be moderately lower than the extremely burdensome stocks of 1954–59, it will still be much larger than in any peacetime year prior to 1954; and the 1960 United States carryover will stand at a new all-time record

peak of about 1,300 million bushels. Moreover, with yields per acre of wheat still rising under continuing scientific and technological improvements (*43*, p. 12), with total domestic utilization stationary or declining, and with Canada "statistically" expected to harvest another bumper wheat crop within the next few years, the existing North American wheat imbalance seems destined to worsen if current government grain policies remain unchanged.

It was to this "chronic" tendency for world wheat surpluses to grow under government intervention that the FAO Group on Grains directed special attention both in 1958 and 1959, pointedly commenting (*44*, p. 11; *45*, p. 10):

> The heart of the problem lies in the level of price or income guarantees to producers of wheat and other grains in many exporting as well as importing countries. These guarantees, combined with other aspects of national agricultural policies, if maintained substantially unchanged, will continue, together with technological advance, to stimulate, year after year, an output larger than can be absorbed by normal effective demand. Independent measures of surplus disposal may, therefore, assume a semipermanent character and affect an increasing part of the international trade in grains, thus adding to the marketing difficulties now being experienced by exporting countries.

The governments of both of the North American wheat exporting countries have intervened in the pricing and marketing of wheat in recent years. But the basic policies of the two governments, the character of the measures adopted, and the degree of price support given have differed so markedly that the international effects of the two national programs have been notably different. Clearly, the two governments have not been equally responsible for the current "chronic" wheat surplus, nor has their separate responsibility been essentially proportional either to their respective wheat exports or to their respective average production of wheat.

On the one hand, the well-known "parity price" policy of the United States Government has aimed at giving producers of wheat and other basic crops the same purchasing power per unit (e.g., per bushel of wheat) as in a much earlier specified base period of favorable farm prices. In contrast, the price policy of the Canadian Government has been much less ambitious: it has been semi-officially reported to be "to shield agricultural producers from the most severe of the fluctuations in prices which characterize the industry," a policy involving the associated aim "to maintain flexibility to the greatest extent possible, . . . and thus to encourage voluntary adjustments to changing economic conditions" (*46*, p. 53).

In pursuing these differing objectives over the past six years, the United States Government has supported wheat prices to producers at levels far *above* (60–80 cents per bushel above) the prices at which the same wheat has been sold to foreign commercial importers (see Chart 3, p. 247), whereas the Canadian Government has maintained a guaranteed minimum price to producers that has continuously stood considerably *below* (20–35 cents below) concurrent commercial export prices. Thus, while American producers have received, and American consumers have been forced to pay, wheat prices that were a third to a half higher than the corresponding international prices, Canadian producers have received, and Canadian consumers have paid, no more than the basic

international prices.[20] Indeed, in some earlier postwar years Canadian consumers paid and producers received less than the going net average export prices.

Moreover, the Canadian Government, like the Government of the United States, has maintained marketing controls to keep domestic deliveries of wheat (also other grains in Canada) from putting excessive pressure on the nation's storage and port facilities. Furthermore, in both countries, these and other controls, combined with price supports and government subsidies for certain other agricultural commodities, have encouraged the expansion of production of coarse grain crops, oilseeds, and livestock products. *By such diverse means, the underlying pressure to produce larger exportable wheat supplies at current prices has been held in check in both Canada and the United States, though not sufficiently in check to bring North American wheat production into line with current average demands (even including government-financed "special" export demands).*

Canadian officials generally insist that their own government policies have not contributed to development or growth of the world wheat imbalance; and they attribute recent burdensome Canadian stocks to the combination of several years of unusually favorable weather in the Prairie Provinces and concurrent and subsequent narrowing of the world commercial export market, both by American "special" exports and by restrictive import and price controls in leading commercial importing countries. In defense of this position, Canadian officials convincingly point not only to (1) Canada's long record of unsubsidized wheat production, unsubsidized commercial exports, and small "special" wheat exports, but also (2) to the lower level of Canadian wheat exports in 1954–59 than in 1924–29 (as contrasted with American exports that more than doubled) and the small increases in Canadian exports since the depression period of 1929–34 and the drought period of 1934–39 (Table 8), and (3) to the *decline* of the Canadian wheat carryover by roughly 225 million bushels since its 1957 peak—a four-year period during which the American wheat carryover *increased* by more than 400 million bushels despite extremely heavy, government-subsidized "special" exports.

These considerations, the comparative wheat production and disposition data shown for the United States in Table 8, and facts presented in earlier sections of the present study leave *no room for doubt that primary responsibility for the world's present wheat imbalance lies with the United States.* Nevertheless, this does not mean that Canadian wheat policies have not also contributed to the underlying imbalance, nor that the Canadian Government is either justified or wise in sitting back, as it apparently has been doing, waiting for the United States and other governments to make all of the fundamental price, supply, trade, and consumption adjustments required to promote a sustainable world wheat balance.

It is important to note that the Canadian Government, through the Canadian Wheat Board, has exercised monopoly pricing and export control over all Canadian wheat, which represents considerably more than a third of the "world's"

[20] Even the so-called "flour export subsidies" which the Canadian Wheat Board has made available in recent years have not been true, government-financed subsidies, but have represented differential export pricing that has lowered the net average prices received by Canadian producers. In contrast, the larger, more generally applicable American export subsidies on flour, which were apparently largely responsible for the introduction of the Canadian flour "subsidies," have been continuously paid for by the United States Treasury.

commercial wheat exports. And Canadian officials have made no secret of the fact that they have strongly resisted any tendency of American officials to push "commercial" export prices down to the minimum level specified in any of the several postwar International Wheat Agreements. At present, in the face of a near-record world wheat surplus, continuing technological improvements, and threats of expanding wheat surpluses in other countries, the Canadian Board has chosen to keep its basic selling price some 20 cents above the current IWA minimum level. Since a lower "world" export price would increase the wheat export subsidies now being paid by a number of countries, ranging from the United States and Australia to Italy and Greece, and would also make import wheat less expensive for all commercial importers, it seems highly probable that sustained lower "world" export prices would encourage a number of foreign governments to lower their own price supports for wheat, make wheat exports less profitable to the USSR, and widen the total commercial import market for wheat in both European and non-European countries. Even if such adjustments should take three to four years to become fully effective, the gain to all low-cost commercial exporters of wheat, including Canada, would be substantial.

Precisely why the Canadian Government has been so reluctant to lower its selling prices for wheat is not clear. Obviously, political influences and concern with inelastic *immediate* import demands have discouraged Canadian price reductions. Obviously, too, the growing Canadian population, the increasing importance of the livestock economy of Western Canada, and the improved postwar demand for Canadian exports of coarse grains, flaxseed, livestock, and livestock products have reduced the dependence of Prairie Province farmers on wider export outlets for wheat. But other, less obvious considerations have presumably also affected the Board's pricing decisions. Conceivably, Canadian officials look forward to using price reduction as a bargaining tool in future international negotiations. Or conceivably, without any free-market guides, the Board is convinced (or has decided to assume) that the constant level at which Canadian wheat prices have been held over the past few years is closely in line with the average level that would be competitively established if American producers were not subsidized. Or, alternatively, the Board may simply have decided to exercise its monopoly pricing power to keep wheat prices at a sustainable level calculated to yield the highest net return to Canadian producers over a period of years.

Whatever combination of factors have been responsible for the insistence of Canadian officials on maintaining "world" export prices above the IWA minimum level, that policy has almost certainly encouraged the expansion of wheat production in a number of marginal exporting countries and has narrowed the "world" commercial import demand for wheat. Nor have American administrators been in a position to force lower international export prices or take a larger share of the existing "commercial" import market, because (1) they represent the nation whose subsidized wheat growers are believed to be primarily rsponsible for the persisting world wheat surplus, and (2) lower export prices would be reflected back in lower returns to Canadian producers but not to Treasury-protected American producers.

Thus tied to limited export markets that seem likely to contract further over the next five years (at current export prices), and faced with the prospect of

continued expansion of American wheat production under present government programs (*43*), the United States Congress cannot long postpone the disagreeable task of making fundamental revisions in the nation's existing wheat legislation. The present study highlights some of the really basic legislative changes that need to be made in order to insure that the United States play a more appropriate and constructive role in international trade and the world grain economy over the coming decade. These indicated changes are summarized in the following section.

FOUR BASIC ELEMENTS FOR A NEW AMERICAN WHEAT PROGRAM

At the end of two World Wars the United States suddenly found itself the top-ranking nation of the world in economic, military, and political power, and also in international responsibility. To a nation that had only recently argued the merits of "isolationism" and that had taken unwarranted pride in not having a well-trained staff of international diplomats and negotiators, the shift in position was abrupt and not entirely welcome. It clearly demanded important adjustments in national thinking, legislation, and administration that were not all palatable and that could not be quickly made.

The more obvious humanitarian responsibilities and international cooperation concepts associated with the new national position were promptly accepted by the American people. They gladly gave the war-devastated countries not only generous postwar food relief but also unprecedented financial aid to speed general economic recovery; they showed an early and continuing interest in furthering international cooperation through the United Nations Organization and related agencies; and they have recently supported heavy Mutual Security appropriations to strengthen both the military defenses and economic progress of associated countries of the "Free World."

Yet as remarkable as these advances in American international operations appear in historical perspective, they do not fully meet the demands of the high position which the United States now holds. In agricultural pricing policies, in agricultural surplus disposal activities, in the import-barrier protection given to many primary commodities and industrial products, and even in part of its defense-oriented foreign aid, the United States has remained internationally immature, backward looking, and unconstructive in its attitudes and activities. Moreover, now that the Soviet Union has risen to challenge the top world ranking and ideological leadership of the United States, partly with prominent displays of scientific skill and partly with offers of two-way trade and spectacular economic development credits, the United States can no longer afford to maintain outdated concepts of the separability of "domestic" economic policies and "foreign" economic policies.

The essential foundation for a constructive new national wheat program, then, is recognition by the United States Congress, the leading farm organizations, and the American public that any "domestic" wheat program is an "international" economic program, and that it should be framed to promote the general international goals of the United States and to conform with the nation's international economic commitments.

In line with this view, the *first and most important basic element* for a new American wheat program is rapid stepping down of the present wheat support price to a level far enough below the prevailing commercial export price to per-

mit American farmers to produce wheat for domestic use and export free from all persisting subsidies and controls. Throughout the world—in GATT, the FAO Group on Grains, the International Wheat Council, and the governments of competing grain exporting countries—the current high American support price has been pointed to as the taproot of the international wheat surplus problem and as the primary factor responsible for trade-disturbing "special" exports. Officials in Canada, Australia, and Argentina contend that wheat producers in those countries are willing to compete with American farmers on a subsidy-free basis, but not with the American Treasury. Moreover, in many leading importing countries and marginal exporting countries (most recently in the important European Economic Community), the high support prices for American wheat have been extensively used by agricultural protectionists as a political weapon to get higher support prices and more restrictive import barriers established by their own governments; and this, in turn, has further narrowed the world import market for American and other export wheats.

Still more important, the high American wheat support price, with its associated import quotas, production subsidies, and export subsidies has run counter to the commitments of the United States Government under GATT; and, jointly with other agricultural support measures, it has seriously weakened the international leadership of American officials in sponsoring worldwide reduction of import barriers and freer multilateral trade. A sharp reduction in the American wheat support price to the "world" level is long overdue.

The ultimate aim should be the establishment of a stand-by price guarantee that would rarely interfere with free market price movements or with the free flow of American wheat to export, but that would nevertheless help to cushion any extraordinarily sharp drop in American wheat prices in an exceptional year of abnormally high world wheat production or other abnormally depressing international developments. At present it would seem reasonable to aim at a guarantee level that would permit American wheat to flow freely to export without subsidy or control at the minimum price specified in the internationally negotiated International Wheat Agreement. This would mean an official minimum price of something like $1.20–$1.25 per bushel, basis No. 2 Hard Winter Wheat at Kansas City of $1.00–$1.05 per bushel as a national farm average. Such a minimum would be roughly equivalent to that currently available to Canadian wheat producers, with allowance for recently prevailing transport and quality price differentials.

How rapidly the present American support price should be lowered to such a stand-by guarantee level is not precisely determinable. The indicated needed reduction (75–80 cents a bushel) is too big and the associated uncertainties and adjustments are too great to warrant a one-year cut of the required magnitude. It seems much more reasonable to preschedule price support reductions of 10–15 per cent annually over a transaction period of several years.

In any case, both the price support level and the timing of changes in that level should be based on world supply-demand conditions, crop adjustment timing factors, and the international responsibilities and commitments of the United States—not on farmer welfare considerations. The individual farmer income problems that result from lowering the government's present artificial support price for wheat should be dealt with separately, in ways that emphasize construc-

tive employment adjustment of high-cost producers and declining, terminable income assistance, without any government intervention in wheat pricing, planting, or marketing (for one recent suggestion along this line see 47).

A second basic element for a constructive American wheat program is relaxation of wheat acreage and marketing restrictions at a pace sufficiently slow to avoid huge new deliveries of surplus wheat to the Commodity Credit Corporation. Not until after the support price has been pushed below the corresponding "international" price should all wheat acreage allotments and marketing quotas be removed; and the intervening steps of relaxation of those controls should be annually determined by the Secretary of Agriculture on the basis of supply-demand forecasts for the following year.

An appropriately modified three-year "Soil Bank" might make a short-time contribution to wheat supply adjustments by restraining overproduction during the price-transition period; and, conceivably, if sufficiently modified, it might also promote changes in line with the longer-term adjustments needed. But special attention needs to be given to insuring that such a "Bank" does not extensively provide a refuge for the fallow land of the Great Plain States, particularly in years of unfavorable moisture conditions, thus resulting in increased government costs without correspondingly reducing production over the entire three-year period. In any case, long continued heavy budgetary outlays for any non-production program would appear indefensible in the light of the many more constructive government expenditures that are now being held back because of "shortage of funds"—expenditures for education, expanded national employment services, medical-payment assistance, etc. Moreover, existing American farm lands should not continue to be restricted as to use, but should be made available to low-cost producers who want to extend their operations, and who can earn satisfactory incomes selling at the low prices essential to permit many underdeveloped countries to buy increasing quantities of needed American grain on commercial terms.

A third basic element for an internationally oriented wheat program is provision for the isolation[21] and constructive use of all old-crop government stocks, with emphasis on methods of utilization that will add to and not displace commercial grain exports. In view of the continuing Cold War, and the reliance of many low-income countries on emergency food-relief aid from this country, it seems desirable for the United States Government to set aside for indefinite maintenance a national "emergency reserve" of roughly 500 million bushels. The remaining surplus stocks (currently 800 million bushels) could be constructively liquidated over a number of years through (1) continued "disaster relief" grants to foreign governments faced with mass hunger following severe drought, floods, war, revolution, or other natural disaster or man-caused devastation;[22] (2) continued donations to private American relief organizations for direct distribution

[21] The "isolation" should not be so complete that it would not allow for release of *special qualities* of wheat needed for current consumption (replaced by other qualities), for stocks-management substitutions, and, in case of a short domestic crop, for net commercial sales of stocked wheat at, say, 115 per cent of the average market price of the three preceding years.

[22] For a few low-income countries that typically suffer from abnormally sharp crop fluctuations, such grants might be somewhat more generous and more effective if associated with the building up of adequately safeguarded emergency stockpiles in those countries. Grant stockpiles of this sort, however, would merely represent an immediate transfer of American surplus wheat from one (visible) position to another (less visible) position, and would not constitute another use of surplus wheat.

to needy persons abroad, with more government inspection of the actual utilization of such grain; and (3) "special development grants" that would involve tied obligations and specific approval by a representative intergovernmental working committee.

It should be noted that no reference has been made to "barter sales" or "foreign currency sales" of American surpluses. The serious defects of those two programs have been discussed earlier (pp. 238–43 and 230–38). Because of those specified defects (largely concealed from the American public through misinformation and misunderstandings based partly on semantic difficulties) and also because the economies of low-income countries struggling to reach the stage of sustainable development should not be burdened with future payments for "additional" current imports of grain that are immediately consumed, it is here recommended that "foreign currency sales" and "barter sales" be promptly discontinued.

In lieu of those internationally distrusted programs should be susbstituted noncompetitive "special development grants" of foodgrains. Such grants could win widespread international approval, partly because they would appear much more generous than "special sales" (despite customary eventual cancellation of most of the stated price of American "special sales"), partly because each "development grant" agreement would supposedly be sanctioned on an annual basis by a representative intergovernmental committee, and partly because the foodgrain grants would represent orderly long-time liquidation of burdensome stocks that would not be rebuilt under the nonsubsidy pricing policy here assumed to be associated with the grants. Moreover, each "development grant" agreement could reasonably include tied obligations, such as (1) commercial purchase by the recipient country of a stated total quantity of "foodgrains," defined to include wheat, rice, and any other grain customarily consumed as food in the country concerned, with the origin of the commercial grain quota limited only by the requirement that the purchase be made from a country not subsidizing exports, directly or indirectly; and (2) use of the domestic currency receipts (channeled to the recipient government through internal sales of the granted wheat) for planned development purposes or inflation control approved by the International Bank for Reconstruction and Development, its subsidiary, the International Development Association, and/or the International Monetary Fund.

Since the Wheat Utilization Committee has already given considerable attention to many of the problems that would arise in connection with such "development grants" of wheat, and since that Committee (composed of representatives from the five major wheat exporting countries and one representative from FAO) is small enough and interested enough to work effectively to promote grants consistent with emphasis on expansion of the world's commerical trade in grain, there is good reason to designate the Wheat Utilization Committee as the basic core of the intergovernmental group needed to approve the specific terms of proposed individual "development grant" agreements. However, since wheat competes so strongly with rice, and even corn and barley, in world trade and consumption, and since America's grain surpluses are not limited to wheat, the intergovernmental group could operate much better as a Grain Utilization

Moreover, the construction of additional grain storage space in any low-income country should be undertaken only if this use of the limited economic resources of that country appears more promising for long-term development than any alternative use.

Committee than as a Wheat Utilization Committee. In any case, in order to take proper account of the interests of the major rice exporting nations and the leading grain importing nations, the Committee's membership should be expanded to include one representative or more from each of those groups of countries (say, Thailand, the United Kingdom, and perhaps Burma and Japan).

A fourth basic element for a new national wheat policy and program is official emphasis on expanding international commercial trade in wheat. This means, on the one hand, encouraging low-cost production of American wheat that can flow freely to export at low prices without any direct or indirect subsidization. It means, on the other hand, active efforts by United States representatives in various international organizations to bring about a concerted general lowering of import barriers and special efforts in intergovernmental conferences and the International Wheat Council to encourage prescheduled lowering of wheat import restrictions and national wheat price supports (particularly in Western Europe and other countries not severely handicapped by balance of payment difficulties). Moreover, after the American wheat support price has been reduced to the world export level, it may become apparent that the International Wheat Agreement minimum price ($1.50 per bushel for No. 1 Manitoba, Fort William) is unrealistically high in view of the worldwide technological improvements that have taken place in wheat production. If so, low-cost American producers might later find themselves handicapped in expanding competitive export sales as much as they might want to do. Moreover, a number of wheat importing governments are certain to argue that their own price support levels are "reasonable" so long as they do not exceed the equivalent of the IWA maximum price ($1.90 for No. 1 Manitoba at Fort William), which may be something like $2.40–$2.50 in leading Western European cities, disregarding quality differences. Since some government officials deliberately choose to disregard quality differences for price support purposes, and since a number of Western European countries are now finding wheat price supports of $2.10–$2.30 quite stimulating to domestic producers, it seems reasonable to suggest that the entire basis of the IWA price range be carefully reconsidered from the standpoint of (1) its possible effect on the total commercial import demand for wheat, and (2) its possible interference with the long-term structural adjustments needed in the world wheat economy.

Considerably more promising for future commercial exports of American wheat (and of many other agricultural and industrial products as well) is a broader and more generally helpful national approach to world trade and foreign aid problems. Such an approach, supplemented by greater national efforts to understand and appreciate differing cultural values and differing political and economic institutions in foreign countries, are to be desired for reasons much more important to the American people and to the entire world than any incidental resulting expansion of American exports. World peace is at stake. So, too, are American ideals of individual freedom and democracy. And scarcely less important is the basic need to provide education and better living conditions for many of the recently awakened peoples of the lower income countries.

In the eyes of too many of the world's peoples, much of the past foreign economic assistance contributed by the United States has been of a negative "Stop

Russia" or "surplus disposal" character. And too often, also, developing countries have found American import barriers too high for their stimulated exports to scale. These several aspects of American foreign economic policy must change —and change quickly—if major world stakes are not to be lost, if better conditions are soon to be provided for the peoples of Asia, Latin America, and Africa, and if, as an incidental result, the purchasing power of those peoples is to be raised enough to permit them to import commercially the much larger quantities of wheat they want to consume.

It is time for the United States to develop a Foreign Economic Development and Trade Program of positive character, a long-term program that is clearly centered on promoting in the less developed countries sustainable economic development and exports along lines of natural advantage. Such a program would involve further increase of American dollar grants specifically earmarked for foreign economic aid, with most of the increase offset by reduction in dollar appropriations for agricultural price support and surplus disposal programs and by some shift of funds from reconsidered foreign "defense support" items.

Under the proposed Development and Trade Program the foreign dollar grants should be restricted only by requirements (1) that the dollars be spent for imports needed to promote economic development plans or financial reforms given high priority ratings by experts associated with the World Bank, the International Development Association, and/or the International Monetary Fund, and (2) that the staffs of those organizations be kept fully informed about subsequent related operations.

For a number of the underdeveloped countries thus aided a small part of the dollar grants would presumably be made available for importing needed foodgrains; but the expansion in commercial wheat trade thus effected could not be expected to be very large.

To help underdeveloped countries increase their domestic production and their export potential without trying to open up wider market outlets for their expanding exports would be largely self-defeating. Clearly, if the United States is to continue to hold its present international position of economic leadership, it must move much faster and farther in the direction of reducing its own import barriers and in engaging in two-way commodity trade.

Moreover, in various international meetings, particularly in meetings of the signatory governments of GATT, American representatives should now renew and strengthen the nation's earlier lead in vigorously sponsoring cooperative international action to lower existing import barriers and to expand freer multilateral trade. Future American leadership in this direction should be focused not only on obtaining reciprocal concessions for American agricultural and industrial exports, but also with promoting worldwide opening of markets to exports from the less developed countries.

A strong Development and Trade Program of this sort would undoubtedly make many of the underdeveloped countries better commercial customers for American and other export wheat. More important, the desired expansion of the world's commercial trade in wheat would be achieved incidentally, as part of a broader program to raise levels of living in low-income countries and to further other American foreign policy goals.

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